SDMS US EPA REGION V -1

SOME IMAGES WITHIN THIS DOCUMENT MAY BE ILLEGIBLE DUE TO BAD SOURCE DOCUMENTS.

147608

SITE INSPECTION REPORT
FOR

CHEMICAL RECOVERY SYSTEMS, INC.
ELYRIA, OHIO
R05-8303-02
R05-8512-06

APRIL 24, 1986
OHD057001810

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

M E M O R A N D U M

DATE: April 28, 1986
TO: File
FROM: Pat Petrella
SUBJECT: Ohio-R05-8303-02/OH0293
Elyria/Chemical Recovery Systems, Inc. Site (CRS)
OHD057001810

This site was originally identified by the Ohio EPA in the form of a Preliminary Assessment submitted to the U.S. EPA. FIT performed a site inspection on February 5, 1986. In addition, sampling of the Black River adjacent to the facility was done as directed on Technical Directive Document R05-8512-06. The purpose of this sampling, site background and description, and a sampling activities' description are described in the attached memo.

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

M E M O R A N D U M

DATE: April 22, 1986
TO: Erin Moran, RPM, USEPA, Region V
FROM: Pat Petrella, Ecology and Environment, Inc., FIT
SUBJECT: Ohio/R05-8512-06
Elyria/Chemical Recovery Systems
OHD057001810

INTRODUCTION

The purpose of this sampling activity was to determine if the Chemical Recovery System, Inc. (CRS) site is presently contributing to contamination of the Black River and to verify the sampling data obtained by the CRS contractor, CLOW, Inc.

A Technical Directive Document (TDD) for requesting FIT services was issued December 17, 1985 for the following scope of work:

- Collect water samples from the Black River upstream and downstream of the CRS site as specified by the RPM.
- Collect a water sample from a designated site outfall to the River, if possible, as specified by the RPM.
- Submit water samples to CLP for analysis.
- Submit a technical memorandum of field activities.

SITE BACKGROUND AND DESCRIPTION

The CRS site is approximately 4 acres and is located at 124 Locust Street, Elyria, Ohio in Lorain County. The downtown area of Elyria is approximately 2.5 blocks from the site. To the North and

East, the site is bordered by Harshaw Chemical Company. It is fenced on the North, South and East sides while bordered by the east branch of the Black River and a 25' high, densely vegatated steep slope on the west. Presently, 1 building and foundations for 2 others structures are onsite. Refer to Section 2 for a location map and site sketch.

The site property is presently owned by Mr. and Mrs. Russell Obitts. Mr. Obitts operated a Chemical Recovery Facility onsite before leasing the property to CRS in 1974. CRS accepted drummed and bulk chemical wastes for reclamination using a distillation process. As a result of citizen complaints and site investigations by the local Health Department and Fire Inspector, severe contamination onsite and in the River was identified. Fire code violations were also found. The Fire Marshall declared the site to be a fire hazard and ordered the violations corrected. Follow-up inspections by the U.S. EPA revealed approximately 4000 55-gallon drums and 53,500 gallon of bulk chemical stored improperly onsite. Sample analyses of spilled materials indicated the presence of various hazardous substances including PCB, trichloroethene, metlyl elthyl Ketone (MEK), toluene and xylene.

Because the site posed a substantial threat to the local population and the environment, U.S. EPA initiated legal action. On October 7, 1980 a civil action was brought on behalf of the U.S. EPA in the U.S. District Court, Northern District of Ohio, against CRS to abate an imminent and substantial endangerment to public health and the environment.

The law suit also sought restitution of money spent for investigation of the site. Chemical Recovery responded by removing the drums, tanks, and process equipment from the site and transporting hazardous waste to U.S. EPA approved disposal sites. In 1981, U.S.

EPA approved disposal sites. In 1981, U.S. EPA requested FIT (Ecology and Environment, Inc.) to perform a hydrogeologic study at the site. Sample analyses revealed a release of contaminants to groundwater and extensive soil and subsurface contamination. As the result of this study and information obtained from other site visits by the U.S. EPA a consent order was issued July 12, 1983. Refer to Section 5 for a copy of this document.

In addition to the remedial work, the consent order required CRS to sample the Black River periodically to monitor the site's impact on the river. The Company contracted CLOW, Inc. to do this surveillance work. To verify the quality of the sampling performed in November, 1985 by CLOW, Inc. and assess river water quality, U.S. EPA requested FIT to sample the River.

FIELD ACTIVITIES

PRE-SAMPLING ACTIVITIES

Upon arrival on February 5, 1986, the entrance to the site was locked. After determining that the appropriate access route to the river for sampling was from onsite, FIT contacted Mrs. Obitts to gain access. After clearing the site, FIT proceeded to locate the sampling points along the river. These locations are shown on Figure 2 in Section 2. Mrs. Obitts left the site requesting FIT lock the gate when sampling was complete

SAMPLING ACTIVITIES

The samples S1, S2, and S3 were collected from three distinct sampling points along the river upstream and downstream of CRS and at an outfall discharge from CRS (See Figure 2). All sample locations were on the east side of the east branch of the Black River. Sample

S1 is the downstream sample, S2 is the outfall sample, and S3, the upstream sample. Sample S1 was collected approximately 12 feet upstream of the site's southern fence line because there was no place to stand along the river's edge, further downstream, to collect the sample. Sample S2, the outfall sample, was collected downstream of a point suspected of being the outfall location sampled by CLOW, Inc. in November, 1985. This alternate location was chosen since the outfall pipe could not be found. This location was chosen based on the following information:

- Approximately 20' upstream of the sampling point was a cove recessed into the river bank that indicated where an outfall may have been active at one time. There was no flow from this location into the river.

- Broken drain tile was noted in the cove area. A report by Ecology and Environment, Inc. (E&E) dated April 26, 1982 indicates that the outfall in question was the drain tile.

- The actual distance from the north site boundary to the center of the cove was approximately that distance measured by E&E during the hydrogeologic study.

A duplicate sample was collected at location S2. A blank of distilled water was also prepared. None of the samples were filtered. The river appeared to exhibit higher flow than usual because of melting snow and rain.

Upon leaving the site at approximately 5:30 p.m., FIT locked the gate. The following day, FIT met with Mr. & Mrs. Obitts and provided a receipt for samples.

SAMPLE SHIPMENT

Samples were packaged and shipped on February 5, 1986 according to established U.S. EPA protocol to the following laboratories:

Chemtech Consulting Group, LTD. (Inorganics)
360 West 11th Street
New York, New York 10014
(212) 255-2100

Hazelton Laboratories (organics)
3301 Kinsman Boulevard
Madison, Wisconsin 53704
(608) 241-4471

92Z:6F

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	057001810

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Chemical Recovery Systems, Inc.	124 Locust St.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Elyria	OH	44035	Lorain	093	19

09 COORDINATES LATITUDE	LONGITUDE
41° 22' 00.0"	82° 10' 00.0"

10 TYPE OF OWNERSHIP (Check one)
■ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
02 05 86 (MONTH DAY YEAR)	☐ ACTIVE ■ INACTIVE	Pre 1974 (BEGINNING YEAR) to 1983 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ■ B. EPA CONTRACTOR Ecology & Environment (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Pat Petrella	Chemical Engineer	Ecology & Environment	(312) 663 9415
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Mark Lunsford	Environmental Scientist	Ecology & Environment	(312) 663 9415
David Vaughn	Geologist		( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Mrs. R. Obiths.	Property Owner	1130 Gulf Rd.	(216) 365-257[illegible]
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	3:00 pm	Rain (Drizzle), Cloudy, Cool

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Erin Moran	U.S. Environmental Protection Agency	(312) 886 7275

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Pat Petrella	U SEPA	Ecology & Environment	312-663-9415	___ (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	057 001 810

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)
- ■ A SOLID
- ☐ B POWDER, FINES
- ☐ C SLUDGE
- ☐ D OTHER (Specify)
- ☐ E SLURRY
- ■ F LIQUID
- ☐ G GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)
- TONS: Prior to
- CUBIC YARDS: cleanup
- NO. OF DRUMS: ~4000 Drums

03 WASTE CHARACTERISTICS (Check all that apply)
- ■ A TOXIC
- ☐ B CORROSIVE
- ☐ C RADIOACTIVE
- ■ D PERSISTENT
- ☐ E SOLUBLE
- ☐ F INFECTIOUS
- ■ G FLAMMABLE
- ■ H IGNITABLE
- ■ I HIGHLY VOLATILE
- ☐ J EXPLOSIVE
- ☐ K REACTIVE
- ☐ L INCOMPATIBLE
- ☐ M NOT APPLICABLE

Site was cleaned up per consent order, 1983.

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	unknown	unknown	Prior to cleanup,
SOL	SOLVENTS	unknown	unknown	quantities of specific
PSD	PESTICIDES			categories were not
OCC	OTHER ORGANIC CHEMICALS	unknown	unknown	available. Sample analyses
IOC	INORGANIC CHEMICALS	unknown	unknown	prior to & following
ACD	ACIDS			cleanup indicates these
BAS	BASES			categories and the
MES	HEAVY METALS	unknown	unknown	following hazardous substances

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	During this SI, FIT sampled the Black River				
	to determine if the site was still contributing contamination.				
	The site facility equipment & wastes have been removed and				
	some soils excavated. In conjunction with this activity,				
	Ecology & Environment performed a hydrogeologic study &				
	sampled GW, soil & River sediments, and Section 5 (Attachment				
1)	outlines these results showing the waste character				
	on site. Refer to this section for information				
	on the haz. substances at the facility. Also listed				
	is recent surface water data on the Black River by E&E for				
(2-5-86)	USEPA, Region II & CLOW, Inc for [redacted] Chem. Recovery Systems Inc.				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Waste solvents, H.M.		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

E&E hydrogeologic Rept., E+E files
Concent order, 1983, E+E files.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: OHD | 02 SITE NUMBER: 057001810

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION | 02 ■ OBSERVED (DATE 4-12-82) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~68
04 NARRATIVE DESCRIPTION: During the sampling of wells for the 4-12-82 report by E+E, an observed release was detected to Groundwater for some heavy Metals and misc. organics. Very few individuals use groundwater for drinking since the entire city is on Lake Erie water.

01 ■ B. SURFACE WATER CONTAMINATION | 02 ■ OBSERVED (DATE 3/81) | ■ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: -0-
04 NARRATIVE DESCRIPTION
Contamination of the Black River has been documented by spills from the site. Closest intake is > 4 miles away in Lake Erie. Leachate seeps have also been seen from the site + an outfall (contaminated) is suspect of being contaminated from the site.

01 ☐ C. CONTAMINATION OF AIR | 02 ☐ OBSERVED (DATE) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: -0-
04 NARRATIVE DESCRIPTION
Odor Complaints and the nature of the process, improperly vented tanks + open drums all indicate potential air contamination problems. These indicators were found onsite prior to the cleanup. Presently no processes, old wastes, or buildings are left onsite. No indication of air problems

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS | 02 ☐ OBSERVED (DATE) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION
These existed prior to a Fire Marshall's order and consent order for cleanup. Presently no problem exists.

01 ☐ E. DIRECT CONTACT | 02 ☐ OBSERVED (DATE) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION
Site is completely fenced and locked on 3 sides. The 4th side is a steep cliff to the River. Accessibility very limited.

01 ■ F. CONTAMINATION OF SOIL | 02 ■ OBSERVED (DATE 4-12-82) | ☐ POTENTIAL | ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: ~4 (Acres)
04 NARRATIVE DESCRIPTION
Samples collected by Ecology + Environment of onsite soil borings show soil contamination.

01 ■ G. DRINKING WATER CONTAMINATION | 02 ☐ OBSERVED (DATE) | ■ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~68
04 NARRATIVE DESCRIPTION
See Sections A + B

01 ☐ H. WORKER EXPOSURE/INJURY | 02 ☐ OBSERVED (DATE) | ☐ POTENTIAL | ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION
None indicated from past activity. Site is presently inactive

01 ☐ I. POPULATION EXPOSURE/INJURY | 02 ☐ OBSERVED (DATE) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION
Possibility before cleanup by air Route + Surface water. Presently no potential indicated.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: OHD | 02 SITE NUMBER: 057001810

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ■ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Contaminated runoff from site + from ant hill as well as on site soil may have caused Flora damage. None observed.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
None observed

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No agricultural or farm related activities. This is unlikely. Urban area.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids/Leaking drums) — 02 ■ OBSERVED (DATE 3/8 + 4/12-83) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~11,000/mile
04 NARRATIVE DESCRIPTION Drums were seen on site leaking and puddles of wastes were sampled on site. Sample results of soil contamination also indicate this.

01 ■ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potential contamination of River + Points downstream contaminated by site wastes carried along.

01 ■ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ■ OBSERVED (DATE 4-12-83) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION Outfall on site leading to river was found to be contaminated.

01 ■ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ■ OBSERVED (DATE 4-12-83 Pre-1983) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
See section M

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS Presently, no other hazards identified.

III. TOTAL POPULATION POTENTIALLY AFFECTED: ~16,000

IV. COMMENTS

None

V. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Site inspection, 2-5-86
E+E Files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OHD	057 001810

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
■ J. NONE	Site is	Presently inactive. No processes.		

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply) PRE CLEANUP	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
■ B. PILES		
■ C. DRUMS, ABOVE GROUND		
■ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify) Presently, none.		

04 TREATMENT (Check all that apply) Pre cleanup

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ■ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ■ H. OTHER Presently inactive (Specify)

05 OTHER

- ■ A. BUILDINGS ON SITE

1

06 AREA OF SITE

~4 (Acres)

07 COMMENTS NONE

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ■ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC. Presently only potentially contaminated soils are left onsite. All drums & wastes have been removed. A diked area exists where tanks once stood.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ■ NO

02 COMMENTS

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Site Inspection
E&E files.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: OHD | 02 SITE NUMBER: 05700181O

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ■	B. □
NON-COMMUNITY	C. □	D. □

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. □	B. □	C. ■
D. □	E. □	F.

03 DISTANCE TO SITE
A. > 4 (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

■ A. ONLY SOURCE FOR DRINKING — In some areas but mostly surface water
■ B. DRINKING (Other sources available) — some areas
COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available)
□ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available)
□ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: ~68
03 DISTANCE TO NEAREST DRINKING WATER WELL: ~2.75 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
~ 30 (ft)	West, Toward Black R.	~ 30 (ft)	unknown (gpd)	□ YES □ NO unknown

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings): Wells in the area are installed into a combined aquifer system of sand + gravel and sandstone. A few are slightly deeper + extend into the shale bedrock.

10 RECHARGE AREA		11 DISCHARGE AREA	
□ YES □ NO	COMMENTS: unknown.	■ YES □ NO	COMMENTS: into Black River.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

■ A. RESERVOIR, RECREATION DRINKING WATER SOURCE
□ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES
□ C. COMMERCIAL, INDUSTRIAL
□ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Black River	■	Adjacent (mi)
Lake Erie	□	~4 (mi)
	□	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. ~14,000 NO OF PERSONS	B. ~33,200 NO OF PERSONS	C. ~50,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: ~ ½ (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 8337

04 DISTANCE TO NEAREST OFF-SITE BUILDING: 200 feet (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area): The area surrounding the site is an urban, industrialized one immediately around the site. It becomes more residential as one gets further from the river but still quite urban.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	057001810

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. 10^{-6} – 10^{-8} cm/sec ■ B. 10^{-4} – 10^{-6} cm/sec ☐ C. 10^{-4} – 10^{-3} cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ■ B. RELATIVELY IMPERMEABLE (10^{-4} – 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE (10^{-2} – 10^{-4} cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
10 - 30 (ft)	~ 6 (ft)	~ 6.0	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
+ 4 (in)	+ 2.2 (in)	< 3 %	TOWARD RIVER West	> 45 %

09 FLOOD POTENTIAL: unknown
SITE IS IN _____ YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY
NA

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 3 (mi)	B. > 3 (mi)

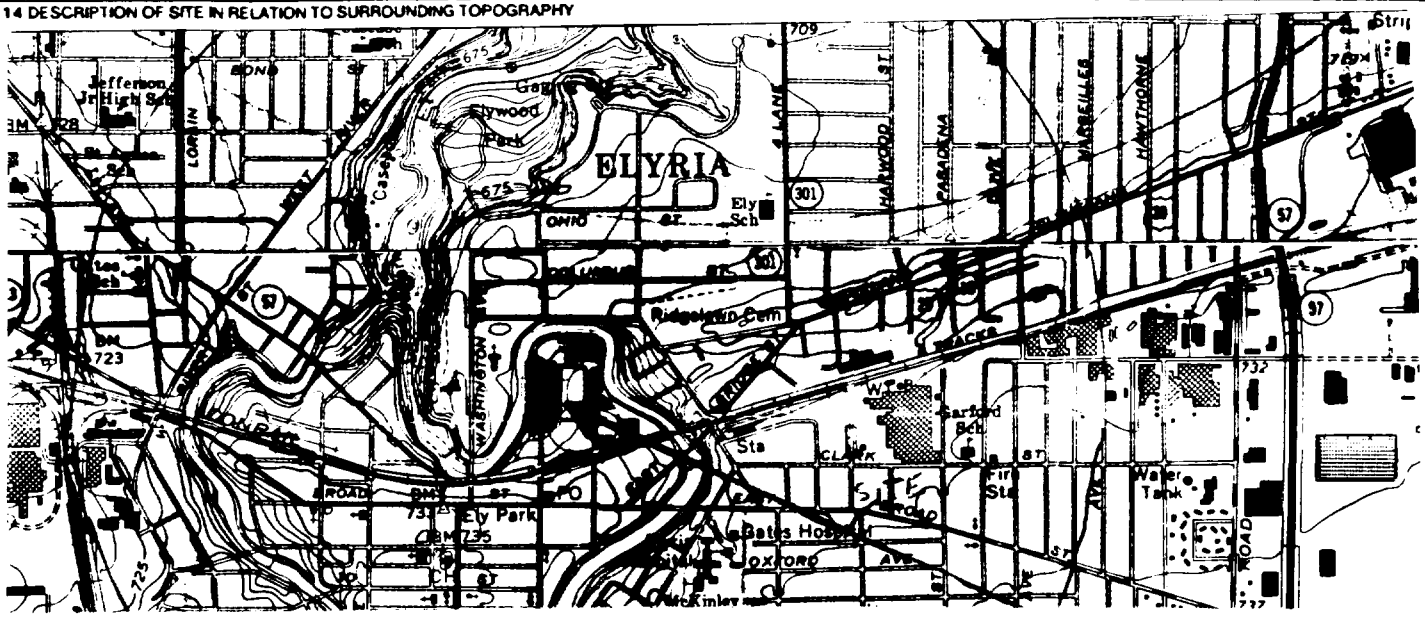
12 DISTANCE TO CRITICAL HABITAT (of endangered species)
> 3 (mi)
ENDANGERED SPECIES: unknown

13 LAND USE IN VICINITY

DISTANCE TO

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. Adjacent (mi)	B. > 3 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E+E Files
Topo - Lorain Quad 7.5 min.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OHD	05 7001810

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER	3	CRL LABS: INORGANIC to ChemTech Consulting Group LTD., New York	~ 70-100 days
WASTE			
AIR		ORGANICS TO: HAZELTON LABS, MADISON, WI.	
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU	Nothing > 6 KgD.
RAD MINI	" " "

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ☐ AERIAL

02 IN CUSTODY OF Ecology + Environment, Inc.
(Name of organization or individual)

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS: Ecology + Environment Files - For site + Surrounding Area

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Field measurements documenting sample locations.
pH, Temp. + Conductivity of samples.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site Inspection.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHO	05700181O

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Mr. Mrs R. Obiths	NA	1130 Gulf Rd	NA	Elyria	OH	44035

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
NA						

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
unknown						

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
NA						

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Interview with Mrs. Obiths
E+E files

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	057001810

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
INACTIVE	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
NA	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
Chemical Recovery System	unk.

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
124 Locust St.	unk.

05 CITY	06 STATE	07 ZIP CODE
Elyria	OH	44035

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
6+	Mr. & Mrs. R. Obitts

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
Chemical Recovery System	unk

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
36345 VAN BORN RD.	unk.

14 CITY	15 STATE	16 ZIP CODE
Romulus	MI	48174

01 NAME	02 D+B NUMBER
Obitts Chemical Recycling	unk

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
124 Locust St	unk

05 CITY	06 STATE	07 ZIP CODE
Elyria	OH	44035

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
unk.	Mr. & Mrs R. Obitts

10 NAME	11 D+B NUMBER
Same as operator	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Interview with Mrs. Obitts

E+E files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION
01 STATE: 010 | 02 SITE NUMBER: 05700186

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
INActive	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
NA			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
NA			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

E+E files
Site Inspection. + Interview.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: OHD | 02 SITE NUMBER: 057001810

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
none indicated

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
none indicated.

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
none indicated.

01 ■ D. SPILLED MATERIAL REMOVED — 02 DATE unk. — 03 AGENCY USEPA
04 DESCRIPTION chemicals from leaking drums & tanks were removed during site cleanup under consent order.

01 ■ E. CONTAMINATED SOIL REMOVED — 02 DATE unk — 03 AGENCY USEPA
04 DESCRIPTION some soils were removed as part of the consent order.

01 ■ F. WASTE REPACKAGED — 02 DATE unk. — 03 AGENCY USEPA
04 DESCRIPTION As part of the cleanup, some materials were repackaged for shipment to a USEPA approved LF.

01 ■ G. WASTE DISPOSED ELSEWHERE — 02 DATE unk. — 03 AGENCY USEPA
04 DESCRIPTION WASTES were taken to a USEPA Approved LF as the result of a consent order.

01 ☐ H. ON SITE BURIAL — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None indicated or observed.

01 ■ I. IN SITU CHEMICAL TREATMENT — 02 DATE NA — 03 AGENCY NA
04 DESCRIPTION The site (facility) was a waste reclaim facility but Nothing indicates contamination was abated using this method.

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
NA

01 ■ K. IN SITU PHYSICAL TREATMENT — 02 DATE unk — 03 AGENCY USEPA
04 DESCRIPTION Removal of soils and wastes onsite as well as all Process equipment

01 ☐ L. ENCAPSULATION — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
unknown

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
unknown.

01 ☐ N. CUTOFF WALLS — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None observed or indicated in records

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
none

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
none observed or indicated in records

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
See section P

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: OHD | 02 SITE NUMBER: 057001810

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
none

01 ☐ S. CAPPING/COVERING | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
unknown.

01 ■ T. BULK TANKAGE REPAIRED | 02 DATE unk | 03 AGENCY USEPA & Fire Marshall
04 DESCRIPTION Bulk tanks were ordered repaired due to Fire HAZARD VIOLATIONS. TANKS were removed.

01 ☐ U. GROUT CURTAIN CONSTRUCTED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
none INDICATED in f. los or observed.

01 ☐ V. BOTTOM SEALED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ W. GAS CONTROL | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
NA

01 ■ X. FIRE CONTROL | 02 DATE unk. 3/81 | 03 AGENCY USEPA & Fire Marshall
04 DESCRIPTION Site operation ordered by Fire MARSHALL to correct numerous Fire code violations. Site now INACTIVE & ALL equipment removed.

01 ☐ Y. LEACHATE TREATMENT | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
none INDICATED or observed.

01 ☐ Z. AREA EVACUATED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
unknown.

01 ■ 1. ACCESS TO SITE RESTRICTED | 02 DATE unk. | 03 AGENCY USEPA
04 DESCRIPTION Request to complete fencing around the facility to prevent access. GATE locked even now.

01 ☐ 2. POPULATION RELOCATED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
unknown.

01 ■ 3. OTHER REMEDIAL ACTIVITIES | 02 DATE unk. | 03 AGENCY _____
04 DESCRIPTION Several spill incidents were acted on by Co. per OEPA & Dept. of Health, to the Black River. They included oily substances, potentially PCB contaminated. "Booms" were placed in the water.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E+E files.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OHD	057 001810

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ■ YES □ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

See Attached information. (Section 3)
ATTACHMENT 1

This is Civil Action brought by USEPA,
also State Fire Marshall declared site Fire
HAZARD, prior to cleanup.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E+E files.

EPA FORM 2070-13 (7-81)

Immediate Removal Action Check Sheet (Present Condition)

	High	Moderate	Low
Fire and Explosion Hazard			
Flammable Materials — none			X
Explosives — none			X
Incompatable Chemicals — none			X
Direct Contact with Acutely Toxic Chemicals			
Site Security — yes			X
Leaking Drums or Tanks — not presently			X
Open Lagoons or pits — " "			X
Materials on Surface — possible contamin.			X
Proximity of Population — < ½ mile		X	
Evidence of Casual Site Use — none			X
Contaminated Water Supply			
Exceeds 10 Day Snarl — none (from site)			X
Gross Taste or Odors — none (from site)			X
Alternate Water Available — none			X
Potential Contamination — none			X
Is the site abandoned or active? site inactive			

Comments

site has had past problem but has been ~~&~~ cleaned up as the result of a consent order from USEPA.

U.S. Department of Justice ATTACHMENT 1

United States Attorney
Northern District of Ohio

Suite 500
1404 East Ninth Street
Cleveland, Ohio 44114

July 25, 1983

Paul J. Schaeffer
U. S. Department of Justice
Land and Natural Resources Division
Hazardous Waste Section, Rm 1515, MAIN
Washington, D. C. 20530

Re: U. S. v. Chemical Recovery Systems, Inc., et al.
Civil Action No. C80-1858
Judge Dowd

Dear Mr. Schaeffer:

In reference to the above-captioned case, enclosed please find a copy of an Order issued by Judge Dowd.

Sincerely yours,

J. WILLIAM PETRO,
UNITED STATES ATTORNEY

By Kathy
Kathleen Ann Sutula
Assistant U. S. Attorney
(FTS) 942-4394

KAS/fv

Enclosure

cc: Jonathan McPhee
Deborah Woitte

DOWD, J.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO

EASTERN DIVISION

United States of America, Plaintiff, vs. Chemical Recovery Systems, Inc., et al., Defendants, and Third Party Plaintiffs, vs. Russell W. Obitts, et al., Third Party Defendants.	)	CASE NO. C80-1858 O R D E R

A status call was held on this matter on July 12, 1983. Counsel for the United States Government and counsel for the defendant Chemical Recovery Systems advised the Court that a proposed consent decree has been submitted by the government to counsel for Chemical Recovery Systems and its approval for presentation to the Court should be made within several weeks.

Accordingly, IT IS HEREBY ORDERED, ADJUDGED, and DECREED that counsel for the plaintiff, the United States Government and the defendant, Chemical Recovery Systems, Inc., are directed to file the proposed consent decree with

the Court by August 12, 1983 or show cause why there has been a failure to do so. Counsel for the third party plaintiff, Chemical Recovery Systems, Inc., and counsel for the third party defendants, Russell W. Obitts and Dorothy Obitts, are directed to appear for an additional status call with respect to the third party action at 8:30 a.m. on October 6, 1983.

David D. Dowd, Jr.
U. S. District Judge

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF OHIO

EASTERN DIVISION

UNITED STATES OF AMERICA, Plaintiff, v. CHEMICAL RECOVERY SYSTEMS, INC., Defendant.	)	NO. C80-1858 CONSENT DECREE

The above-captioned Complaint having been filed pursuant to 33 U.S.C. §1251 et seq. and 42 U.S.C. §6901 et seq. on October 7, 1980, and the parties, the UNITED STATES OF AMERICA, for the Administrator of the United States Environmental Protection Agency (hereinafter "U.S. EPA") and CHEMICAL RECOVERY SYSTEMS, INC., an Ohio corporation, (hereinafter "CRS") by their respective attorneys having consented to the entry of this Consent Decree:

NOW, THEREFORE, before taking any testimony, upon the pleadings, and without admission or adjudication of any issue of fact or law herein, and upon consent of the parties hereto, it is hereby ORDERED, ADJUDGED, AND DECREED as follows:

I. JURISDICTION

This Court has jurisdiction over the parties and subject matter of this action.

II. APPLICATION OF DECREE

This Decree shall apply to and be binding upon the United States and CRS (the Parties), and the successors and assigns of each, as well as any agencies, instrumentalities, officers, directors, agents and servants thereof acting in their respective official capacities. CRS shall provide a copy of this Decree to each contractor it retains to perform work contemplated in this Decree and shall condition any contract for such work on compliance with this Decree and applicable provisions of the approved plans as contemplated in this Decree. A copy of this Decree shall be lodged with the Recorder of Deeds for Lorain County, Ohio, to provide notice of the history of this Site to prospective purchasers of the CRS site located on 146 Locust Street, Elyria, Ohio (hereinafter "site").

III. OBJECTIVES

The objectives of the parties to this Decree are the abatement of any hazardous conditions at the CRS Site which may have existed both before and after CRS took title to the premises, and the abatement of discharges of contaminants, if any, into groundwater and the Black River from the CRS site.

IV. REPRESENTATIONS

CRS represents that it has, as of the entry of this Decree:

A. Removed all tanks, drums and other spent solvent containers from the Site;

B. Ceased the receipt, processing and storage of spent solvents on Site;

C. Removed all temporary structures, the Brighton Still and the building which housed it as well as the Rodney Hunt Still, all storage tanks and all buildings except the upper warehouse;

D. Secured the CRS Site by completing the existing fence so as to enclose the facility on all sides except the riverbank in order to prevent access by unauthorized persons;

E. Filled in the sump under the Brighton Still building and sealed the sump under the Rodney Hunt Still building with concrete;

F. Conducted soil testing and groundwater studies;

G. Leveled dikes and rough graded selected areas.

V. REMEDIAL MEASURES

A. On or before August 15, 1983, CRS shall:

1. Jointly conduct a visual inspection of the site with U.S EPA technical personnel, to identify spots of visibly contaminated soil if any. CRS shall give 10 working days notice of the date of this inspection to U.S. EPA. U.S. EPA may take samples of such soil for analysis.

2. Excavate all visibly contaminated soil identified by the above inspection;

3. Excavate the perimeter of the Brighton Still building in the northwest corner of the Site, to a depth of one foot, and to a distance of two feet beyond the perimeter of the foundation;

4. Dispose of all soil removed in these excavations in an U.S. EPA approved waste disposal site;

5. Backfill the excavated areas with clean clay-containing fill, as necessary, and grade to conform with existing terrain;

6. Gently grade the Site towards the river bank to a slope of approximately three percent (3%).

B. At the next horticulturally appropriate time, CRS will seed the Site with appropriate grasses.

C. CRS will conduct monitoring of the Black River adjacent to the Site a total of at least four times following entry of this Decree, for the following chemicals, PCBs and volatile organics listed in 40 C.F.F. §116.4, pursuant to §311(b) to (A) of the Clean Water Act, on the following basis:

1. Each monitoring shall consist of at least three samples, one of which is to be taken at the outfall from the sewer at CRS, and one downstream from the said outfall. The location of the third sample shall be determined by CRS. Both river samples shall be depth-integrated composites.

2. All sampling and analysis shall be conducted according to U.S. EPA protocols, copies of which shall be provided upon request, and at a qualified laboratory, identified in advance to U.S. EPA.

3. Sampling shall take place once each spring, during the first period of intensive melting of snow, or within 48 hours of the first rainfall of one inch or more after March 1, whichever occurs first; and once each fall,

within 48 hours after the first rainfall of one inch or more following August 15; for two years next following entry of this Decree. At least 8 hours' notice of each said sampling shall be given to the Eastern District Office of U.S. EPA by telephone (216-835-5200).

4. All sample results shall be conveyed to U.S. EPA in writing within ten days of their receipt by CRS.

VI. RESPONSIBILITIES AND LIABILITIES

A. CRS is ultimately responsible for designing and implementing all remedial measures. No advice, guidance, suggestions or comments by U.S. EPA on plans and reports submitted by CRS shall be construed to relieve CRS of this responsibility or transfer any of CRS' liability or obligation in this action to EPA.

B. Upon completion of the activities required in paragraph V of this Decree, CRS shall submit a notice to the Director, Waste Management Division, Region V, U.S. EPA, certifying that such measures have been completed in full satisfaction of the requirements of this Decree.

C. Whenever, under the terms of this Decree, a report or other document is required to be forwarded by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice in writing to the other Party of another individual designated to receive such communications. Reports or documents shall be provided as to U.S. EPA:

Director, Waste Management Division
United States Environmental Protection Agency
Region V (5HR)
230 South Dearborn Street
Chicago, Illinois 60604

As to CRS:

Chemical Recovery Systems, Inc.
c/o David C. Long
Suite 175
24500 Center Ridge Road
Westlake, Ohio 44145

D. Until termination of the provisions of this Consent Decree, ant thereafter in accordance with applicable law, the U.S. EPA, its contractors and consultants, shall have authority to enter the CRS site at all reasonable times with prior notice to CRS, for the purpose of (1) monitoring the progress of CRS in carrying out remedial measures, and (2) observing sampling procedures required under paragraph V of this Decree. U.S. EPA, its contractors, and consultants shall have the authority to require split samples in any such sampling procedure.

E. All actions required to be taken by this Decree shall be undertaken in compliance with the requirements of applicable federal laws, including the Occupational Safety and Health Act, 29 U.S.C. 651 et seq., and regulations promulgated thereunder.

F. All data, information, remedial plans, and other documents produced by CRS in the course of implementing this Consent Decree shall be available to the public, unless identified as confidential by CRS in conformance with 40 C.F.R. Part 2. The sampling and monitoring data and hydrological and geological

information shall not be considered confidential. Documents or information identified as confidential will be disclosed only in accordance with the confidentiality regulations of 40 C.F.R. Part 2.

G. No conveyance of title, easement, or other interest in the site shall be consummated by CRS or subsequent holders of any interest in the property without written notice to U.S. EPA and notice to the prospective conveyee as to the conditions of this Consent Decree. After completion of the requirements of this Consent Decree, the copy of the consent decree lodged with the Lorain County Recorder of Deeds shall constitute adequate notice to prospective conveyees for purposes of this Decree.

VII. EXCUSABLE DELAY

The requirements of this Decree shall be implemented within the time limits contained in this Decree unless such performance is impeded by reasons which constitute excusable delay or unavoidable accident. "Excusable delay or unavoidable accident" is any delay in the completion, scheduling, or performance of a particular task, which arises from unforeseeable events beyond the control and without fault or negligence of CRS. CRS shall notify U.S. EPA within 24 hours of the occurrence or discovery of any such event, and submit a proposed revised schedule for compliance. U.S. EPA may then agree to excuse or permit delay of such compliance. If U.S. EPA does not so agree, CRS may petition the Court for an excuse or a delay.

VIII. MODIFICATIONS

The Court shall retain jurisdiction of this matter for the purposes of enabling the Parties to this Decree to apply to the Court for any further order that may be needed to construe, carry out, modify, or enforce compliance with the terms and objectives of this Decree until the termination of this Decree in accordance with the provisions of paragraph X.

IX. STIPULATED PENALTIES

Upon demand by U.S. EPA and upon the appropriate Motion and Order of this Court, CRS shall pay to the United States an amount not to exceed one thousand five hundred dollars ($1,500) per day for each day that it fails to comply with the provisions of this Consent Decree. In exercising its discretion in seeking to have the Court impose a penalty hereunder, U.S. EPA shall take into account the magnitude of the violation, the duration of the violation, and any mitigating factors.

X. TERMINATION

The provisions of this Consent Decree shall terminate upon CRS' receipt of written notice from U.S. EPA that the remedial and monitoring provisions of this Decree have been successfully completed. Such notice shall issue within 60 days of the date that CRS performs the last act required of it by this Decree and so informs U.S. EPA unless the court orders otherwise.

XI. EXCEPTIONS AND RESERVATIONS

This Consent Decree shall in no way affect any third party actions existing as a part of this lawsuit, nor shall this Decree be construed so as to affect the rights or duties of the parties under the Comprehensive Environmental Response, Compensation and Liability Act. 42 U.S.C. §9601, et seq..

XII. ENTRY

The Parties hereby consent to the entry of this Consent Decree.

Dated and entered this _____ day of _____, 1983.

_____
UNITED STATES DISTRICT JUDGE

The Parties agree and consent hereto.

_____
F. HENRY HABICHT, II
Acting Assistant Attorney General
Land and Natural Resources Division
United States Department of Justice
Washington, D.C. 20530

_____
J. WILLIAM PETRO
United States Attorney
Northern District of Ohio
Cleveland, Ohio

_____
PAUL J. SCHAEFFER
Department of Justice
Washington, D.C.

COURTNEY M. PRICE
Special Counsel for Enforcement
U.S. EPA
Washington, D.C.

for VALDAS V. ADAMKUS
Regional Administrator
U.S. EPA Region V
Chicago, Illinois

DAVID C. LONG
Attorney for Chemical
Recovery Systems

CHEMICAL RECOVERY SYSTEMS, INC.
By: Peter J. Shagena
Secretary

Table 1a. Inorganic analyses of soils on 8/4/81 and 8/5/81, in ppm

	Boring# / Sample #					
	5-1	5-2	5-3	6-1	6-2	6-3
Compounds / Depth	0-1.5'	2.5-4'	5-6.5'	0-1.5'	2.5-4'	5-6.5'
Aluminum	3400	1300	2000	3500	880	1900
Boron	14	47	ND	ND	ND	17
Barium	83	16	24	63	43	180
Chromium	3.2	ND	ND	39	ND	99
Cobalt	ND	10	14	24	14	350
Copper	300	150	14	51	14	1800
Iron	3900	2100	1900	3600	2100	4200
Manganese	300	120	140	450	340	360
Nickel	28	ND	ND	7.8	ND	42
Zinc	6100	540	990	240	50	620
Arsenic	3.3	1.5	1.5	4.7	1.6	41
Cadmium	14	ND	ND	24	6.2	680
Mercury	ND	ND	ND	ND	ND	ND
Lead	200	48	48	240	83	1100
Antimony	ND	ND	ND	3.0	15	69
Selenium	ND	ND	ND	ND	ND	1.0
Tin	2.1	3.2	3.9	ND	ND	2.2

Table continued

Compounds / Depth	Boring# / Sample # 6-4 10-11.5'	7-1 0-1.5'	7-2 2.5-4'	7-5 15-16.5'	8-1 0-1.5'	8-2 2.5-4'
Aluminum	3800	3500	1000	1300	1600	1200
Boron	12	ND	12	ND	ND	ND
Barium	63	37	170	88	54	37
Chromium	3.2	88	120	130	2.7	ND
Cobalt	ND	56	34	6.5	ND	ND
Copper	14	190	120	42	18	22
Iron	2200	3700	2600	5800	5600	4400
Manganese	97	360	280	42	220	280
Nickel	ND	23	46	88	ND	ND
Zinc	550	310	320	210	67	29
Arsenic	1.3	4.4	7.2	15	1.3	1.2
Cadmium	120	33	18	7.7	1.1	2.5
Mercury	ND	ND	ND	ND	ND	ND
Lead	1600	350	860	83	95	33
Antimony	ND	11	32	ND	ND	ND
Selenium	ND	ND	ND	ND	ND	ND
Tin	ND	ND	2.8	3.7	ND	ND

Table continued

	Boring# / Sample #				
	8-3	8-4	8-5	9-1	9-2
Compounds / Depth	5-6.5'	10-11.5'	15-16.5'	0-1.5'	2.5-4'
Aluminum	1600	3400	3400	640	400
Boron	30	20	13	ND	ND
Barium	21	38	16	77	ND
Chromium	2.7	4.5	ND	9.5	ND
Cobalt	8.1	12	ND	ND	ND
Copper	19	33	7.5	26	ND
Iron	3000	4800	5400	2400	3600
Manganese	160	190	210	750	400
Nickel	7.9	10	8.8	13	ND
Zinc	53	130	16	41	3.5
Arsenic	1.7	1.3	2.7	11	ND
Cadmium	3.3	3.1	0.34	11	ND
Mercury	0.023	0.025	ND	ND	ND
Lead	68	64	16	47	9.8
Antimony	ND	ND	ND	ND	ND
Selenium	ND	ND	ND	ND	ND
Tin	ND	ND	8.0	ND	ND

Table 2. Organic analyses of the Black River sediment, 9/16/82, in ppb

Compounds	Sediment SS-1	SS-2	SS-3	SS-4
Methylene Chloride	60	40	4800	40
Trichlorofluoromethane	ND	ND	10	10
Chloroethane	ND	ND	130	ND
1,1 Dichloroethane	ND	ND	590	ND
1,1,1 Trichloroethane	ND	ND	1500	ND
Vinyl Chloride	ND	ND	130	ND
1,1 Dichloroethane	ND	ND	20	ND
1,2 Transdichloroethylene	ND	ND	2100	ND
Trichloroethylene	ND	ND	530	ND
Tetrachloroethylene	ND	ND	580	ND
Benezene	ND	ND	10	ND
Toluene	ND	ND	4900	ND
Ethyl Benzene	ND	ND	4600	10
Phenol	ND	ND	340	ND
1,2 Dichlorobenzene	ND	ND	280	ND
PCB - Total	ND	ND	140	ND
Butylbenzlphthalate	ND	220	<220	ND
Di-N-Octyl Phthalate	ND	ND	220	ND
Bis(2 Ethyl Hexyl) Phthalate	ND	300	4000	1100
Naphthalene	ND	ND	640	ND
Acenaphthene	<200	ND	<200	ND
Chrysene/Benzo(a)Anthracene	4100	2100	4800	2700
Pyrene	3600	1500	ND	1200
Fluoranthene	4600	1900	3500	1400
Benzo(a)Pyrene	3400	2900	4000	1000
Benzo(k)Fluoranthene	3700	3100	4500	1200
Anthracene/Phenanthrene	3000	1500	3000	840
Fluorene	200	<200	<200	ND
Benzo(ghi)Perylene	1300	1500	300	410
Dibenzo(a,h)Anthracene	<500	<500	680	ND
Indeno(1,2,3-cd)Pyrene	1000	1300	2300	410

Table 2a. Inorganic analyses of the Black River sediment on 9/16/81, in ppb

	Sediment			
	SS-1	SS-2	SS-3	SS-4
Aluminum	5,600,000	1,200,000	2,700,000	2,000,000
Chromium	6,600	14,000	79,000	12,000
Barium	35,000	140,000	160,000	89,000
Beryllium	ND	ND	ND	ND
Cadmium	ND	ND	32,000	6,100
Cobalt	11,000	7,100	29,000	10,000
Copper	7,200	11,000	350,000	6,900
Iron	1,900,000	2,600,000	3,800,000	3,100,000
Lead	84,000	49,000	190,000	52,000
Nickel	11,000	22,000	400,000	32,000
Manganese	1,300,000	160,000	490,000	190,000
Zinc	81,000	50,000	480,000	67,000
Boron	ND	ND	22	ND
Vanadium	ND	ND	ND	ND
Calcium	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA
Sodium	NA	NA	NA	NA
Arsenic	4,800	ND	3,800	1,600
Antimony	ND	ND	ND	ND
Selenium	ND	ND	ND	ND
Thallium	ND	ND	1,400	ND
Mercury	ND	ND	ND	ND
Tin	ND	ND	ND	ND
Silver	3,200	ND	6,800	ND

Site Hydrology (continued)

$$Q = (K) \times \left(\frac{dh}{dl}\right) \times (A)$$

where, Q = flow rate

$\frac{dh}{dl}$ = hydraulic gradient, or 0.05

A = cross-sectional area perpendicular to flow, or 1600 feet^2

K = permeability, 1 x 10^{-4}cm/sec or 100 ft/year

based on the above data:

Q = (100 ft/yr) x (0.05) x (1600 ft^2)

Q = 8,000 ft^3/yr or 59,800 gal/yr

This is the flow rate of ground water entering into the Black River from that portion of the CRS site affected by dumping.

A similar calculation for ground water velocity, V, can be made with the following equation:

$$V = (K) \times \left(\frac{dh}{dl}\right) \times \frac{1}{Ne}$$

where, V = velocity

Ne = effective porosity, or .15

this yields,

V = (100 ft/yr) x (0.05) x (1/.15)

V = 33 ft/yr

This is the velocity at which ground water moves at the site.

Table 3. Organic analyses of the E&E wells, in ppb

Compounds	Downgradient Wells				Upgradient Wells	
	Well #1		Well #2		Well #3	Well #4
	8/5/81	9/16/81	8/5/81	9/16/81	9/16/81	9/16/81
Methylene Chloride	71,000	NA	6500	ND	ND	ND
1,1 Dichloroethane	ND	NA	5300	ND	ND	ND
1,1,1 Trichloroethane	12,000	NA	2200	ND	ND	ND
Vinyl Chloride	ND	NA	ND	1000	ND	ND
1,1 Dichloroethylene	ND	NA	ND	1900	ND	ND
1,2 Transdichloroethylene	6100	NA	10,000	1000	ND	ND
Trichloroethylene	6300	NA	ND	ND	ND	ND
Benzene	1100	NA	1900	1000	ND	ND
Toluene	100,000	NA	4500	3000	ND	ND
Ethyl Benzene	14,000	NA	ND	ND	ND	ND
Phenol	590	NA	19	ND	ND	ND
2,4 Dimethylphenol	45	NA	<10	ND	ND	ND
1,2 Dichlorobenzene	ND	NA	<10	ND	ND	ND
Pentachlorophenol	ND	NA	16	ND	ND	ND
PCB-1248	29	NA	<0.1	ND	ND	ND
PCB-1254	18	NA	<0.1	ND	ND	ND
Dimethyl Phthalate	<10	NA	ND	ND	ND	ND
Diethyl Phthalate	ND	NA	<10	ND	ND	ND
Di-N-Butyl Phthalate	<10	NA	ND	ND	ND	ND
Butyl Benzl Phthalate	27	NA	<10	ND	ND	ND
Bis(2 Ethyl Hexyl) Phthalate	27	NA	<10	ND	ND	ND
Naphthalene	130	NA	29	ND	ND	ND
Chrysene/Benzo(a)Anthracene	<10	NA	<10	ND	ND	ND
Pyrene	<10	NA	<10	ND	ND	ND
Fluoranthene	<10	NA	<10	ND	ND	ND
Benzo(a)Pyrene	<10	NA	11	ND	ND	ND
Benzo(k)Fluoranthene	<10	NA	<10	ND	ND	ND
Anthracene/Phenanthrene	<10	NA	<10	ND	ND	ND
Fluorene	<10	NA	ND	ND	ND	ND
2-Chloronaphthalene	<10	NA	ND	ND	ND	ND

Table 3a. Inorganic analyses of E&E wells, in ppb

	Upgradient Wells		Downgradient Wells			
	W-3	W-4	W-1		W-2	
Compounds	9/16/81	9/16/81	8/5/81	9/16/81	8/5/81	9/16/81
Aluminum	4200	3100	136,000	110,000	347,000	86,000
Chromium	490	300	1620	2500	910	790
Barium	ND	ND	164	1100	2740	1100
Beryllium	ND	ND	8	ND	14	ND
Cadmium	ND	ND	300	820	195	ND
Cobalt	ND	ND	280	ND	330	ND
Copper	ND	ND	1000	1700	1340	670
Iron	8400	4700	276,000	210,000	926,000	ND
Lead	580	600	840	2500	1160	1100
Nickel	ND	ND	460	1000	1040	820
Manganese	13,000	4000	6560	7400	1980	14,000
Zinc	13,000	4200	4550	8600	7040	5100
Boron	NA	NA	1450	NA	740	NA
Vanadium	ND	ND	290	ND	640	ND
Calcium	NA	NA	742,000	NA	521,000	NA
Magnesium	NA	NA	125,000	NA	240,000	NA
Sodium	NA	NA	597,000	NA	250,000	NA
Arsenic	ND	ND	700	310	400	140
Antimony	ND	ND	70	ND	ND	ND
Selenium	ND	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND
Mercury	ND	ND	ND	ND	3	ND
Tin	ND	ND	120	ND	100	ND
Silver	ND	ND	ND	ND	ND	ND

Table 4. Organic analyses of the Black River surface water, 9/16/82, in ppb

Compounds	Surface Water			
	SW-1	SW-2	SW-3	SW-4
Methyl Chloride	ND	34	ND	ND
Methylene Chloride	12	ND	8500	72
Chloroform	ND	ND	<10	ND
Carbon Tetrachloride	ND	ND	<10	ND
Dichlorobromomethane	ND	ND	<10	ND
Chloroethane	ND	ND	11	ND
1,1 Dichloroethane	ND	ND	52	ND
1,1,1 Trichloroethane	ND	ND	320	ND
Vinylchloride	ND	ND	100	ND
1,2 Transdichloroethylene	ND	ND	ND	<10
Trichloroethylene	ND	ND	1000	ND
Tetrachloroethylene	ND	ND	420	ND
Benzene	ND	ND	15	ND
Toluene	ND	ND	15	ND
1,2 Dichlorobenzene	<10	<10	140	<10
1,3 Dichlorobenzene	ND	ND	29	ND
2,4 Dichlorophenol	74	11	14	12
2,4,6 Trichlorophenol	59	ND	ND	<10
1,4 Dichlorobenzene	ND	ND	37	ND
Diethyl Phthalate	<10	<10	<10	<10
Bis(2 Ethyl Hexyl) Phthalate	18	<10	ND	ND
Naphthalene	ND	ND	<10	ND

Table 4a. Inorganic analyses of the Black River surface water on 9/16/81, in ppb

Compounds	Surface Water			
	SW-1	SW-2	SW-3	SW-4
Aluminum	550	1800	200	400
Chromium	ND	ND	ND	ND
Barium	50	90	140	60
Beryllium	ND	ND	ND	ND
Cadmium	ND	ND	20	ND
Cobalt	ND	ND	ND	ND
Copper	ND	40	40	ND
Iron	900	2660	1660	620
Lead	ND	ND	ND	ND
Nickel	ND	ND	1890	20
Manganese	100	130	450	80
Zinc	ND	30	80	20
Boron	80	90	140	90
Vanadium	ND	ND	ND	ND
Calcium	67,900	68,500	86,400	70,100
Magnesium	18,200	18,100	19,100	18,700
Sodium	23,000	23,400	39,200	24,000
Arsenic	ND	ND	ND	ND
Antimony	ND	ND	20	ND
Selenium	ND	ND	10	ND
Thallium	ND	ND	50	ND
Mercury	ND	ND	ND	ND
Tin	ND	ND	ND	ND
Silver	ND	ND	ND	ND

Table Inorganic analyses of the Black River sediment on 9/16/81, in ppb

	Sediment			
	SS-1	SS-2	SS-3	SS-4
Aluminum	5,600,000	1,200,000	2,700,000	2,000,000
Chromium	6,600	14,000	79,000	12,000
Barium	35,000	140,000	160,000	89,000
Beryllium	ND	ND	ND	ND
Cadmium	ND	ND	32,000	6,100
Cobalt	11,000	7,100	29,000	10,000
Copper	7,200	11,000	350,000	6,900
Iron	1,900,000	2,600,000	3,800,000	3,100,000
Lead	84,000	49,000	190,000	52,000
Nickel	11,000	22,000	400,000	32,000
Manganese	1,300,000	160,000	490,000	190,000
Zinc	81,000	50,000	480,000	67,000
Boron	ND	ND	22	ND
Vanadium	ND	ND	ND	ND
Calcium	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA
Sodium	NA	NA	NA	NA
Arsenic	4,800	ND	3,800	1,600
Antimony	ND	ND	ND	ND
Selenium	ND	ND	ND	ND
Thallium	ND	ND	1,400	ND
Mercury	ND	ND	ND	ND
Tin	ND	ND	ND	ND
Silver	3,200	ND	6,800	ND

Table Inorganic analyses of soils on 8/4/81 and 8/5/81, in ppm

	Boring# / Sample #					
	5-1	5-2	5-3	6-1	6-2	6-3
Compounds / Depth	0-1.5'	2.5-4'	5-6.5'	0-1.5'	2.5-4'	5-6.5'
Aluminum	3400	1300	2000	3500	880	1900
Boron	14	47	ND	ND	ND	17
Barium	83	16	24	63	43	180
Chromium	3.2	ND	ND	39	ND	99
Cobalt	ND	10	14	24	14	350
Copper	300	150	14	51	14	1800
Iron	3900	2100	1900	3600	2100	4200
Manganese	300	120	140	450	340	360
Nickel	28	ND	ND	7.8	ND	42
Zinc	6100	540	990	240	50	620
Arsenic	3.3	1.5	1.5	4.7	1.6	41
Cadmium	14	ND	ND	24	6.2	680
Mercury	ND	ND	ND	ND	ND	ND
Lead	200	48	48	240	83	1100
Antimony	ND	ND	ND	3.0	15	69
Selenium	ND	ND	ND	ND	ND	1.0
Tin	2.1	3.2	3.9	ND	ND	2.2

Table continued

	Boring# / Sample #					
	6-4	7-1	7-2	7-5	8-1	8-2
Compounds / Depth	10-11.5'	0-1.5'	2.5-4'	15-16.5'	0-1.5'	2.5-4'
Aluminum	3800	3500	1000	1300	1600	1200
Boron	12	ND	12	ND	ND	ND
Barium	63	37	170	88	54	37
Chromium	3.2	88	120	130	2.7	ND
Cobalt	ND	56	34	6.5	ND	ND
Copper	14	190	120	42	18	22
Iron	2200	3700	2600	5800	5600	4400
Manganese	97	360	280	42	220	280
Nickel	ND	23	46	88	ND	ND
Zinc	550	310	320	210	67	29
Arsenic	1.3	4.4	7.2	15	1.3	1.2
Cadmium	120	33	18	7.7	1.1	2.5
Mercury	ND	ND	ND	ND	ND	ND
Lead	1600	350	860	83	95	33
Antimony	ND	11	32	ND	ND	ND
Selenium	ND	ND	ND	ND	ND	ND
Tin	ND	ND	2.8	3.7	ND	ND

Table continued

	Boring# / Sample #				
	8-3	8-4	8-5	9-1	9-2
Compounds / Depth	5-6.5'	10-11.5'	15-16.5'	0-1.5'	2.5-4'
Aluminum	1600	3400	3400	640	400
Boron	30	20	13	ND	ND
Barium	21	38	16	77	ND
Chromium	2.7	4.5	ND	9.5	ND
Cobalt	8.1	12	ND	ND	ND
Copper	19	33	7.5	26	ND
Iron	3000	4800	5400	2400	3600
Manganese	160	190	210	750	400
Nickel	7.9	10	8.8	13	ND
Zinc	53	130	16	41	3.5
Arsenic	1.7	1.3	2.7	11	ND
Cadmium	3.3	3.1	0.34	11	ND
Mercury	0.023	0.025	ND	ND	ND
Lead	68	64	16	47	9.8
Antimony	ND	ND	ND	ND	ND
Selenium	ND	ND	ND	ND	ND
Tin	ND	ND	8.0	ND	ND

Table Inorganic analyses of the Black River surface water on 9/16/81, in ppb

Compounds	Surface Water			
	SW-1	SW-2	SW-3	SW-4
Aluminum	550	1800	200	400
Chromium	ND	ND	ND	ND
Barium	50	90	140	60
Beryllium	ND	ND	ND	ND
Cadmium	ND	ND	20	ND
Cobalt	ND	ND	ND	ND
Copper	ND	40	40	ND
Iron	900	2660	1660	620
Lead	ND	ND	ND	ND
Nickel	ND	ND	1890	20
Manganese	100	130	450	80
Zinc	ND	30	80	20
Boron	80	90	140	90
Vanadium	ND	ND	ND	ND
Calcium	67,900	68,500	86,400	70,100
Magnesium	18,200	18,100	19,100	18,700
Sodium	23,000	23,400	39,200	24,000
Arsenic	ND	ND	ND	ND
Antimony	ND	ND	20	ND
Selenium	ND	ND	10	ND
Thallium	ND	ND	50	ND
Mercury	ND	ND	ND	ND
Tin	ND	ND	ND	ND
Silver	ND	ND	ND	ND

Table Inorganic analyses of E&E wells, in ppb

	Upgradient Wells		Downgradient Wells			
	W-3	W-4	W-1		W-2	
Compounds	9/16/81	9/16/81	8/5/81	9/16/81	8/5/81	9/16/81
Aluminum	4200	3100	136,000	110,000	347,000	86,000
Chromium	490	300	1620	2500	910	790
Barium	ND	ND	164	1100	2740	1100
Beryllium	ND	ND	8	ND	14	ND
Cadmium	ND	ND	300	820	195	ND
Cobalt	ND	ND	280	ND	330	ND
Copper	ND	ND	1000	1700	1340	670
Iron	8400	4700	276,000	210,000	926,000	ND
Lead	580	600	840	2500	1160	1100
Nickel	ND	ND	460	1000	1040	820
Manganese	13,000	4000	6560	7400	1980	14,000
Zinc	13,000	4200	4550	8600	7040	5100
Boron	NA	NA	1450	NA	740	NA
Vanadium	ND	ND	290	ND	640	ND
Calcium	NA	NA	742,000	NA	521,000	NA
Magnesium	NA	NA	125,000	NA	240,000	NA
Sodium	NA	NA	597,000	NA	250,000	NA
Arsenic	ND	ND	700	310	400	140
Antimony	ND	ND	70	ND	ND	ND
Selenium	ND	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND
Mercury	ND	ND	ND	ND	3	ND
Tin	ND	ND	120	ND	100	ND
Silver	ND	ND	ND	ND	ND	ND

TABLE OF CONTENTS

SURFACE WATER SAMPLE S3

15'

fence

Harshaw Chemical Company

concrete pit

SURFACE WATER SAMPLE S2

20'

Suspected outfall location

JOHN ST.

Outfall pipe

Chemical Recovery Systems, Inc.

metal drain

12'

building

SURFACE WATER SAMPLE S1

Samples collected approximately 4 feet from river's edge

BLACK RIVER - EAST BRANCH

BLACK RIVER - WEST BRANCH

LOCUST ST.

CENTER ST.

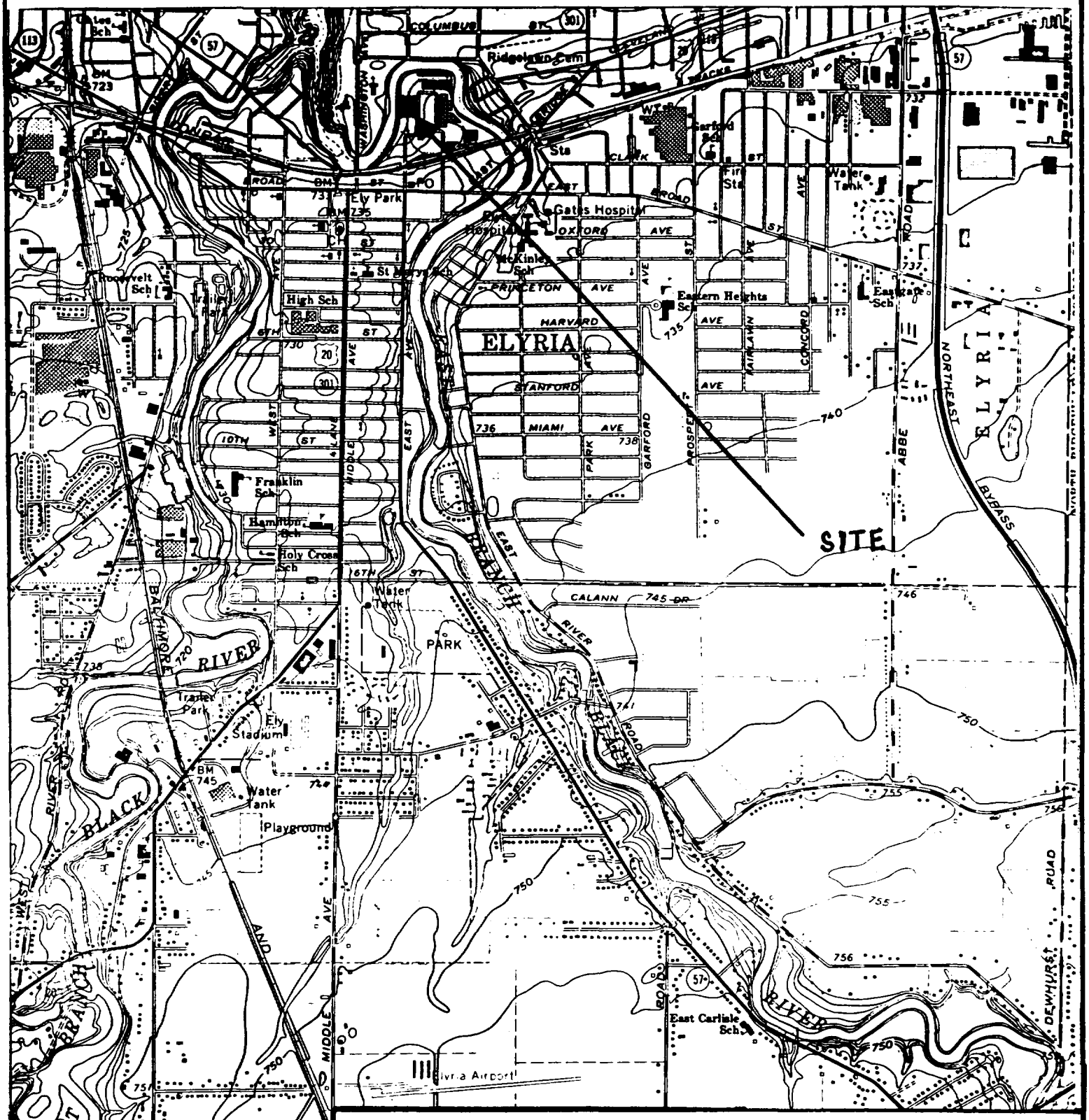
PINE ST.

N

ecology and environment, inc.
111 WEST JACKSON BOULEVARD
CHICAGO, IL 60604

SURFACE WATER SAMPLE LOCATIONS ALONG the BLACK RIVER adjacent to CHEMICAL RECOVERY SYSTEMS SITE in ELYRIA, OHIO

DR. BY:	CK. BY:	SITE MAP
SCALE NONE	DATE APRIL 25.1986	REV PPP
PROJECT NO.: R05 – 8512 – 06	SHEET 2 OF 2 SHEETS	



ecology and environment, inc.
111 WEST JACKSON BOULEVARD
CHICAGO, IL 60604

SCALE: 1 : 24000	SITE LOCATION MAP	DRAWN BY
DATE: APRIL 17, 1986	ELYRIA, OHIO	REVISED

CHEMICAL · RECOVERY SYSTEMS SITE

GRAFTON, OHIO QUAD - 7.5MIN

DRAWING NUMBER
1

SDMS US EPA REGION V
FORMAT- OVERSIZED - 5
IMAGERY INSERT FORM

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DESCRIPTION OF ITEM(S)	PHOTOS - SITE INSPECTION REPORT		
REASON WHY UNSCANNABLE	___OVERSIZED	OR	_x_ FORMAT
DATE OF ITEM(S)	2/5/86		
NO. OF ITEMS	10		
PHASE	SITE ASSESSMENT		
PRP	RMD CHEMICAL RECOVERY		
PHASE (AR DOCUMENTS ONLY)	___ Remedial ___ Removal ___ Deletion Docket ___ AR ___ Original ____ Update # ___ Volume ____ of ___		
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INTRODUCTION TO DATA TABLES

A SUMMARY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED, HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC INFORMATION IS PROVIDED IN THE ATTACHED DATA SHEETS.

I) REPORTING UNITS
- A) ORGANICS
  - 1) Water Samples - ug/l or ppb (parts per billion)
  - 2) Soils or Sediments - ug/kg or ppb (parts per billion)
- B) METALS
  - 1) Water Samples - ug/l or ppb
  - 2) Soils or sediments - mg/kg or ppm

II) DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A) ORGANICS

Footnote	Definition	Interpretation
UJ	Detection Limit (D.L.) is estimated because of a Quality Control (QC) protocol. D.L. is possibly above or below Contract Required Detection Limit (CRDL).	Compound was not detected
UB	Compound found in laboratory blank. No Value above CRDL.	Compound was not detected
UJB	Compound found in laboratory blank, but not detected in sample. CRDL is estimated because of a QC protocol.	Compound was not detected
B	Compound found in blank. Two interpretations are possible:	
	a) If sample value is equivalent to D.L. to 5x blank concentration	Compound value is semi-quantitative.
	b) If sample value is greater than 5x the blank concentration	Compound value is quantitative
JB	Compound found in blank, value is estimated because of QC protocol.	Compound value is semi-quantitative
R	Do Not Use Value. Major Violation of QC Protocol	Compound value is not usable.
C	Value adjusted for blank (an unacceptable procedure)	Compound value is semi-quantitative
J	Value is above CRDL and is an estimated value because of a QC protocol	Compound value is semi-quantitative
Q	No Analytical Result	Compound was not detected
N	Presumptive evidence for the presence of a compound as used for a Tentatively Identified Compound (TIC)	Compound value is semi-quantitative

B) METALS

FOOTNOTE	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative.	Compound or element was not detected or value is semi-quantitative
s	Analysis by Method of Standard Additions (Look for a "+" Footnote)	Value is quantative
R	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semiquantitative
*	Duplicate value outside QC protocols which indicates a possible matrix problem	Value is semiquantitative
+	Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative.	Data value is biased
[ ]	Value is real, but is above instrument D.L. and below CRDL	Value may be quantitative or semiquantitative
UJ	D.L. is estimated because of a QC protocol. D.L. is possibly above or below CRDL.	Compound or element was not detected
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value is semiquantitative

COMPOUND	ITC	OTC	SAMPLE										
	MEG198	EE993	ug/L SW-2	SW-2 Dup. ug/L	MEG195	EG536	MEG197	EG538	MEG196	EG537	MEE311	EG534	SW-3 ug/L	BLANK ug/L	SW-1 ug/L
chloromethane															
bromomethane															
vinyl chloride															
chloroethane															
methylene chloride															
acetone															
carbon disulfide															
1,1-dichloroethene															
1,1-dichloroethane															
trans-1,2,-dichloroethene															
chloroform															
1,2-dichloroethane															
2-butanone															
1,1,1-trichloroethane															
carbon tetrachloride															
vinyl acetate															
bromodichloromethane															
1,1,2,2-tetrachloroethane															
1,2-dichloropropane															
trans-1,3-dichloropropene															
trichloroethene															
dibromochloromethane															
1,1,2-trichloroethane															
benzene															
cis-1,3-dichloropropene															
2-chloroethylvinylether															
bromoform															
2-hexanone															
4-methyl-2-pentanone															
tetrachloroethene															
toluene	3JB			4JB			2BJ		2BJ		3BJ				
chlorobenzene															
ethylbenzene															
styrene															
total xylenes	3J			2J			4J								
N-nitrosodimethylamine															
phenol															
aniline															
bis(2-chloroethyl)ether															
2-chlorophenol															
1,3-dichlorobenzene															
1,4-dichlorobenzene															
benzyl alcohol															
1,2-dichlorobenzene															
2-methylphenol															
bis(2-chloroisopropyl)ether															
4-methylphenol															
N-nitroso-di-n-propylamine															
hexachloroethane															
nitrobenzene															
isophrone															
2-nitrophenol															
2,4-dimethylphenol															
benzoic acid															
bis(2-chloroethoxy)methane															
2,4-dichlorophenol															
1,2,4-trichlorobenzene															
napthalene															
4-chloroaniline															
hexachlorobutadiene															
4-chloro-3-methylphenol															
2-methylnapthalene															
hexachlorocyclopentadiene															
2,4,6-trichlorophenol															
2,4,5-trichlorophenol															
2-chloronaphthalene															
2-nitroaniline															
dimethyl phthalate															
acenapthylene															
3-nitroaniline															
acenaphthene															
2,4-dinitrophenol															
4-nitrophenol															
dibenzofurnan															
2,4-dinitrotoluene															
2,6-dinitrotoluene															
diethylphthalate															
4-chlorophenyl-phenylether															
flourene															
4-nitroaniline															
4,6-dinitro-2-methylphenol															
N-nitrosodiphenylamine															
4-bromophenyl-phenylether															
hexachlorobenzene															

STATE OHIO SITE Chemical Recovery Systems TDD R05-8512-06 PAGE 1 OF 2, SET # 1

COMPOUND	ITC	OTC	SAMPLE											
	ME6198	ME6195	ME6197	ME6196	MEE311									
	EE993	EG536	EG538	EG-537	EG534									
	SW-2 ug/L	ug/L SW-2 Dup	ug/L SW-3	ug/L Blank	ug/L SW-1									
pentachlorophenol														
phenanthrene														
anthracene														
di-n-butylphthalate														
fluoranthene														
benzidine														
pyrene														
butylbenzylphthalate														
3,3'-dichlorobenzidine														
benzo(a)anthracene														
bis(2-ethylhexyl)phthlate														
chrysene														
di-n-octyl phthlate														
benzo(b&k)fluoranthene														
benzo(a)pyrene														
indeno(1,2,3-cd)pyrene														
dibenzo(a,h)anthracene														
benzo(g,h,i)perylene														
alpha-BHC														
beta-BHC														
delta-BHC														
gamma-BHC(lindane)														
heptachlor														
aldrin														
heptachlor epoxide														
endosulfan I														
dieldrin														
4,4'-DDE														
endrin														
endosulfan II														
4,4'-DDD														
endrin aldehyde														
endosulfan sulfate														
4,4'-DDT														
methoxychlor														
endrin ketone														
chlorodane														
toxaphene														
Aroclor-1016														
Aroclor-1221														
Aroclor-1232														
Aroclor-1242														
Aroclor-1248														
Aroclor-1254														
Aroclor-1260														
ELEMENT														
aluminum	8290	8350	8520	[95]	8170									
antimony														
arsenic														
barium	[79]	[86]	·											
beryllium														
cadmium														
calcium	29300	28100	27500		28700									
chromium	12	13	[9.4]		[9.6]									
cobalt														
copper														
iron	12000	11800	12300	[61]	12200									
lead	9.2	11	9.6	[3]	15									
magnesium	9380	8010	8960		9060									
manganese	201	195	196		191									
mercury	•													
nickel	[22]													
potassium	[4810]	5320	5290		5420									
selenium														
silver														
sodium	15700	15000	14600		15400									
thallium														
tin														
vanadium														
zinc	54	57	56		62									
cyanide CHECK IF ANALYZED ( )														
TENTATIVELY IDENTIFIED ORGANICS														
4-hydroxy-4methyl-2-pentanone	23	26	16	13	33									

STATE OHIO SITE Chemical Recovery Systems TDD R05-8512-06 PAGE 2 OF 2, SET # 1

SAMPLE DESCRIPTION

SITE NAME/TDD# Chemical Recovery Systems/Black River samples/RS-8512-06

CASE NUMBER 5558

SAMPLE #/STATION LOCATION SW-1/Downstream sample at edge of property off riverbank

SAMPLING DATE 2-5-86 SAMPLING TIME 1530

ORGANIC TRAFFIC NUMBER EG 534

INORGANIC TRAFFIC NUMBER ME E 311

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
80 oz. jug	organics - P.P.	5-45324, 5-45325	15312032
40 ml. vial	VOA	5-45326, 5-45327	25261302
Liter	metals	5-45328	35317452

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH 6.5-6.7

CONDUCTIVITY 230 rpm or 340 μmhos

TEMPERATURE 3°C.

SAMPLE DESCRIPTION

SITE NAME/TDD# Chemical Recovery Systems/Black River samples/RS-8512-06

CASE NUMBER 5558

SAMPLE #/STATION LOCATION Matrix Spike Duplicate for SW-1/Downstream sample ~~from~~ at edge of property off riverbank

SAMPLING DATE 2-5-86 SAMPLING TIME 1530

ORGANIC TRAFFIC NUMBER EE994

INORGANIC TRAFFIC NUMBER ME — N/A

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
80 oz. jug	organics - P.P.	5-45330, 5-45329	15312032
40 ml. vial	VOA	5-45333, 5-45332	25261302

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH 6.5-6.7

CONDUCTIVITY 230 FFM or 340 µmhos

TEMPERATURE 3°C.

SAMPLE DESCRIPTION

SITE NAME/TDD# Chemical Recovery Systems/Black River samples/RS-8512-06

CASE NUMBER 5558

SAMPLE #/STATION LOCATION SW-2 / Midstream sample near outfall

SAMPLING DATE 2-5-86 SAMPLING TIME 1620

ORGANIC TRAFFIC NUMBER EE 993

INORGANIC TRAFFIC NUMBER MEG 198

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
80 oz. jug	organics - P.P.	5-45341, 5-45340	1531205Z ✓
40 ml. vial	VOA	5-45343, 5-45342	25261302
Liter	metals	5-45344	3531M452

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH 6.4

CONDUCTIVITY ~400 umhos

TEMPERATURE 3°C.

SAMPLE DESCRIPTION

SITE NAME/TDD# Chemical Recovery Systems/Black River samples/RS-8512-06

CASE NUMBER 5558

SAMPLE #/STATION LOCATION Duplicate for SW-2 Midstream sample from trunk at center of riverfront (near outfall)

SAMPLING DATE 2-5-86 SAMPLING TIME ~~1530~~ 1620

ORGANIC TRAFFIC NUMBER EG536

INORGANIC TRAFFIC NUMBER MEG195

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
80 oz. jug	organics - P.P.	5-45346, 5-45345	15312052 ✓
40 ml. vial	VOA	5-45348, 5-45347	25261302
Liter	metals	5-45350	35317452

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH 6.4

CONDUCTIVITY ~400 µmhos

TEMPERATURE 30°C.

SAMPLE DESCRIPTION

SITE NAME/TDD# Chemical Recovery Systems/Black River samples/RS-8512-06

CASE NUMBER 5558

SAMPLE #/STATION LOCATION SW-3/ upstream sample just beyond fence off Marshaw Chemical property

SAMPLING DATE 2-5-86 SAMPLING TIME 1645

ORGANIC TRAFFIC NUMBER EG 538

INORGANIC TRAFFIC NUMBER MEG 197

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
80 oz. jug	organics - P.P.	5-45316, 5-45315	15312052 ✓
40 ml. vial	VOA	5-45318, 5-45317	25261302
Liter	metals	5-45319	35317452

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH 6.5

CONDUCTIVITY 375 umhos

TEMPERATURE 3°C.

SAMPLE DESCRIPTION

SITE NAME/TDD# Chemical Recovery Systems/Black River samples/RS-8512-06

CASE NUMBER 5558

SAMPLE #/STATION LOCATION BL/BLANK

SAMPLING DATE 2-5-86 SAMPLING TIME 1530

ORGANIC TRAFFIC NUMBER EG537

INORGANIC TRAFFIC NUMBER MEG196

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
80 oz. jug	organics - P.P.	5-45320, 5-45349	15317052 ✓
40 ml. vial	VOA	5-45321, 5-45322	25261302
Liter	metals	5-45323	35317452

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH 7.5-7.75

CONDUCTIVITY 4 ppm = 10 μmhos

TEMPERATURE 12°C.

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

Date Received for Review: 4/29/86 Date Review Completed: 5/5/86

TO: Pat Petrella

FROM: Suzanne Kozlowski

SUBJECT: Chemical Recovery Systems

Sample Description: Case # 5558 five (5) low water organics

Project Data Status: COMPLETE

FIT Data Review Findings:

See Tom Clyne's review

Additional Comments:

Book No. 5
Page No. 108

RECEIVED APR 2 9 1986

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 4/18/86

SUBJECT: Review of Region V CLP Data
Received for Review on ___4 MAR 86_____

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory

TO; Data User:_____FIT_____

We hve reviewed the data for the following case(s).

SITE NAME___CHEMICAL RECOVER_SYSTEMS_____SMO Case No. _5558____
No. of D.U./Activity
EPA Data Set No SF 3031___Samples__5____Numbers __Y905/C48500____

CRL No.___86FD04S78 TO 86FD04S80_____

SMO TRAFFIC No._____EE933,EE934,EG536 TO EG538_____
Hrs. Required
CLP Laboratory _____HAZELTON_____for review:_____4_____

Following are out findings:

A	SURROGATES	VOA AND SV ARE ACCEPTABLE. PESTICIDES HAS A LOW DBC FOR EE934. THE REMAINING SURROGATES ARE ACCEPTABLE.
B	MS/MSD	ENDRIN HAS A 34 AND 42% %R LEVEL. THE REMAINING R%D AND %R ARE ACCEPTABLE.
C	LAB BLANKS	MB-1, 30164 HAD TOLUENE (CRDL. MB-1, 30172 HAD ACETONE (14) AND TOLUENE (1). THE REMAINING BLANKS ARE ACCEPTABLE.
D	TUNING	ACCEPTABLE
E	DETECTION	THIS LAB HAS SV DETECTION LIMITS 2X THE NORMAL CRDL. F. THOMAS IS INVESTIGATING THIS PROBLEM.

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications.
( ) Data are preliminary - pending verification by contractor lab.
( ) Data are unacceptable.

cc: Dr. Alfred Haeber/ Joan Fisk/Gary Ward. EPA Support Services.
Ross K. Robeson, EMSL-LasVegas
Don Trees, CLP/Sample Management Office

((((USER"S INFORMATION))))

CASE: 5558 SITE: CHEMICAL RECORERY SYSTEMS

DATE: 25 MARCH 86 REVIEWER: TOM CLYNE

EE993 TOLUENE FOUND IN THE BLANK. DO NOT USE TOLUENE.
TOTAL XYLENE FOUND, BUT BELOW CRDL. THERE IS A TIC
LAB ARTIFACT.
NO HRS HITS

EE994 TOLUENE IN THE BLANK, DO NOT USE.
XYLENE IS A --J--. TIC IS AN ARTIFACT.
NO HRS HITS.

EG 536 TOLUENE FOUND IN THE BLANK, DO NOT USE.
TIC ARE ARTIFACTS.
NO HRS HITS.

EG 537 TOLUENE FOUND IN BLANK, DO NOT USE. THE TIC IS A LAB
ARTIFACT FOR SV AND UNKNOWN IN THE VOA.
NO HRS HITS

EG 538 TOLUENE FOUND IN THE BLANK, DO NOT USE.
TOTAL XYLENES FOUND, BUT --J--. THE TIC IS A LAB
ARTIFACT.
NO HRS HITS.

SUMMARY: THERE ARE NO HRS HITS IN THIS DATA PACKAGE.

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HAZLETON LABORATORIES AMERICA, INC

3301 KINSMAN BLVD. • P.O. BOX 7545 • MADISON, WI 53707 • (608) 241-4471 • TLX 703956 HAZRAL MDS UD

February 21, 1986

Sample Management Office
Viar and Company
300 Noth Lee Street
Alexandria VA 22314

Enclosed please find the data packages for Case No. 5558. These samples were received on February 6, 1986 from U. S. EPA Region V. All samples were analyzed and reported according to the protocols provided under our Contract No. 68-01-7146.

Please note the following summary comments relating to the contractual quality control items in this case:

- GC-MS Tuning. All tuning requirements for both BFB and DFTPP for samples analyzed in this case were within contract criteria.

- Instrumental Calibrations. All instrumental calibrations for all fractions analyzed (VOA, BNA, and pesticides) were within contract criteria for both initial and continuing calibrations.

  Please note that on the Pesticide Evaluation Standards Summary (Form VIII), DBC is not added to our individual Mix B, toxaphene, or PCB 1260 standards when co-elution problems interfere with either a specific target compound or a major identifying peak on the column used. We also use an extra standard we call "column check" which contains only DDT and endrin and is used exclusively for the calculation of breakdown.

- Surrogate Recoveries. The surrogate recoveries calculated and reported for the volatile, semi-volatile and pesticide fractions were found within contract limits with one exception. The DBC surrogate was outside of the advisory limits (low end), for sample EE994 of the pesticide fraction.

- Method Blanks. All method blanks analyzed with this case were found to be within acceptable contract criteria for all fractions.

If you have any questions regarding this case or need any further clarifications, please feel free to call.

Sincerely,

David C. Hills

David C. Hills
Manager, Environmental Analysis

DCH/msw

cc: USEPA Region V
USEPA EMSL-LV
Central File

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In Reference to Case No(s): 5558

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: 25 Mar 86

Laboratory Name: Hazleton Lab (608) 241-4447

Lab Contact: DAVE HILLS

Region: V

Regional Contact:

Call Initiated By: ___ Laboratory ✓ Region

In reference to data for the following sample number(s):

(1) DL X2 (SV) have been done for [illegible]
(2) Surrogates
(3) Acetone IDL at 37 [illegible] 110

Summary of Questions/Issues Discussed:

(1)

(2) [illegible]

(3) DL for acetone may have reproducibility problems

Summary of Resolution:

Signature [illegible] Date 25 Mar 86

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

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86FP04578

Sample Number
EE 993

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201135
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Hill
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 30165
Date Analyzed: 2-9-86 1317
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 U
10061-02-6	Trans-1, 3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1, 1, 2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1, 3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 U
108-88-3	Toluene	~~4 JB~~ 5 U NO TC
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	~~3 J~~ 5 U TC

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explained.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration / dilution action. (This is not necessarily the instrument detection limit.) The footnote should read "U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample."

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible / probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

RECEIVED APR 2 9 1986

Laboratory Name HAZLETON LABORATORIES

Case No: 5558

Sample Number
EE493

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-6-86

Conc/Dil Factor: 1

Percent Moisture (Decanted) 1902

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

FRN 27076

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	20 U
111-44-4	bis(2-Chloroethyl)Ether	20 U
95-57-8	2-Chlorophenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	20 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
39638-32-9	bis(2-chloroisopropyl)Ether	20 U
106-44-5	4-Methylphenol	20 U
621-64-7	N-Nitroso-Di-n-Propylamine	20 U
67-72-1	Hexachloroethane	20 U
98-95-3	Nitrobenzene	20 U
78-59-1	Isophorone	20 U
88-75-5	2-Nitrophenol	20 U
105-67-9	2,4-Dimethylphenol	20 U
65-85-0	Benzoic Acid	100 U
111-91-1	bis(2-Chloroethoxy)Methane	20 U
120-83-2	2,4-Dichlorophenol	20 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	Naphthalene	20 U
106-47-8	4-Chloroaniline	20 U
87-68-3	Hexachlorobutadiene	20 U
59-50-7	4-Chloro-3-Methylphenol	20 U
91-57-6	2-Methylnaphthalene	20 U
77-47-4	Hexachlorocyclopentadiene	20 U
88-06-2	2,4,6-Trichlorophenol	20 U
95-95-4	2,4,5-Trichlorophenol	100 U
91-58-7	2-Chloronaphthalene	20 U
88-74-4	2-Nitroaniline	100 U
131-11-3	Dimethyl Phthalate	20 U
208-96-8	Acenaphthylene	20 U
99-09-2	3-Nitroaniline	100 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	20 U
51-28-5	2,4-Dinitrophenol	100 U
100-02-7	4-Nitrophenol	100 U
132-64-9	Dibenzofuran	20 U
121-14-2	2,4-Dinitrotoluene	20 U
606-20-2	2,6-Dinitrotoluene	20 U
84-66-2	Diethylphthalate	20 U
7005-72-3	4-Chlorophenyl-phenylether	20 U
86-73-7	Fluorene	20 U
100-01-6	4-Nitroaniline	100 U
534-52-1	4,6-Dinitro-2-Methylphenol	100 U
86-30-6	N-Nitrosodiphenylamine (1)	20 U
101-55-3	4-Bromophenyl-phenylether	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	100 U
85-01-8	Phenanthrene	20 U
120-12-7	Anthracene	20 U
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	Fluoranthene	20 U
129-00-0	Pyrene	20 U
85-68-7	Butylbenzylphthalate	20 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	20 U
117-81-7	bis(2-Ethylhexyl)Phthalate	20 U
218-01-9	Chrysene	20 U
117-84-0	Di-n-Octyl Phthalate	20 U
205-99-2	Benzo(b)Fluoranthene	20 U
207-08-9	Benzo(k)Fluoranthene	20 U
50-32-8	Benzo(a)Pyrene	20 U
193-39-5	Indeno(1,2,3-cd)Pyrene	20 U
53-70-3	Dibenzo(a,h)Anthracene	20 U
191-24-2	Benzo(g,h,i)Perylene	20 U

(1)-Cannot be seperated from diphenylamine

Laboratory Name HAZLETON LABORATORIES RECEIVED APR 2 9 1986

Case No 5558

Sample Number EE 993

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-6-86

Date Analyzed 2-12-86

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/L or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1000 ml or W_s — V_t 10,000 ul V_i 4.0 ul

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number: EE993

Organics Analysis Data Sheet
(Page 4)

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Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	123422	4-hydroxy-4-methyl-2-pentanone *	BAN	205	23
2.					
3.		no volatiles found	VOA		
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

* product of the aldol condensation of acetone

RECEIVED APR 2 9 1986

86FP0457M
Sample Number
EE 994

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201136
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Hill
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 30166
Date Analyzed: 2-8-86 1355
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 U
10061-02-6	Trans-1, 3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1, 1, 2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1, 3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 U
108-88-3	Toluene	3 JB
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	2 J

VO TC

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration / dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J
C	This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS
B	This flag is used when the analyte is found in the blank as well as a sample. It indicates possible / probable blank contamination and warns the data user to take appropriate action
Other	Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

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Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number: EE994

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-6-86

Conc/Dil Factor: 1

Percent Moisture (Decanted) 1950

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

FRN Z1077

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	20 U
111-44-4	bis(2-Chloroethyl)Ether	20 U
95-57-8	2-Chlorophenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	20 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
39638-32-9	bis(2-chloroisopropyl)Ether	20 U
106-44-5	4-Methylphenol	20 U
621-64-7	N-Nitroso-Di-n-Propylamine	20 U
67-72-1	Hexachloroethane	20 U
98-95-3	Nitrobenzene	20 U
78-59-1	Isophorone	20 U
88-75-5	2-Nitrophenol	20 U
105-67-9	2,4-Dimethylphenol	20 U
65-85-0	Benzoic Acid	100 U
111-91-1	bis(2-Chloroethoxy)Methane	20 U
120-83-2	2,4-Dichlorophenol	20 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	Naphthalene	20 U
106-47-8	4-Chloroaniline	20 U
87-68-3	Hexachlorobutadiene	20 U
59-50-7	4-Chloro-3-Methylphenol	20 U
91-57-6	2-Methylnaphthalene	20 U
77-47-4	Hexachlorocyclopentadiene	20 U
88-06-2	2,4,6-Trichlorophenol	20 U
95-95-4	2,4,5-Trichlorophenol	100 U
91-58-7	2-Chloronaphthalene	20 U
88-74-4	2-Nitroaniline	100 U
131-11-3	Dimethyl Phthalate	20 U
208-96-8	Acenaphthylene	20 U
99-09-2	3-Nitroaniline	100 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	20 U
51-28-5	2,4-Dinitrophenol	100 U
100-02-7	4-Nitrophenol	100 U
132-64-9	Dibenzofuran	20 U
121-14-2	2,4-Dinitrotoluene	20 U
606-20-2	2,6-Dinitrotoluene	20 U
84-66-2	Diethylphthalate	20 U
7005-72-3	4-Chlorophenyl-phenylether	20 U
86-73-7	Fluorene	20 U
100-01-6	4-Nitroaniline	100 U
534-52-1	4,6-Dinitro-2-Methylphenol	100 U
86-30-6	N-Nitrosodiphenylamine (1)	20 U
101-55-3	4-Bromophenyl-phenylether	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	100 U
85-01-8	Phenanthrene	20 U
120-12-7	Anthracene	20 U
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	Fluoranthene	20 U
129-00-0	Pyrene	20 U
85-68-7	Butylbenzylphthalate	20 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	20 U
117-81-7	bis(2-Ethylhexyl)Phthalate	20 U
218-01-9	Chrysene	20 U
117-84-0	Di-n-Octyl Phthalate	20 U
205-99-2	Benzo(b)Fluoranthene	20 U
207-08-9	Benzo(k)Fluoranthene	20 U
50-32-8	Benzo(a)Pyrene	20 U
193-39-5	Indeno(1,2,3-cd)Pyrene	20 U
53-70-3	Dibenz(a,h)Anthracene	20 U
191-24-2	Benzo(g,h,i)Perylene	20 U

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES RECEIVED APR 2 9 1986

Case No 5558

Sample Number EE 994

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-12-86

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1000 ml or W_s — V_t 10,000 ul V_i 4.0 ul

Laboratory Name HAZLETON LABORATORIES

Case No 5558

Sample Number EE 994

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

RECEIVED APR 2 9 1986

	CAS Number	Compound Name	Fraction	RT or (Scan) Number	Estimated Concentration (ug/l or ug/kg)
1.	123422	4-hydroxy- 4-methyl - 2- pentanone *	BAN	205	33
2.					
3.		no volatiles found	VOA		
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

* product of the aldol condensation of acetone

76EP04D78

Sample Number
EG 536

RECEIVED APR 2 9 1986

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201137
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Wilk
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 30169
Date Analyzed: 2-8-86 1551
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropene	5 U
10061-02-6	Trans-1, 3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1, 1, 2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1, 3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 U
108-88-3	Toluene	4 BJ
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	2 J

NC TC

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U to e.g., 10U) based on necessary concentration / dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/µl in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible / probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

RECEIVED APR 2 9 1986

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number: EG 536

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-6-86

Conc/Dil Factor: 1 FRN Z1073

Percent Moisture (Decanted) 1637

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	20 U
111-44-4	bis-2-Chloroethylether	20 U
95-57-8	2-Chlorophenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	20 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
39638-32-9	bis2-chloroisopropylEther	20 U
106-44-5	4-Methylphenol	20 U
621-64-7	N-Nitroso-Di-n-Propylamine	20 U
67-72-1	Hexachloroethane	20 U
98-95-3	Nitrobenzene	20 U
78-59-1	Isophorone	20 U
88-75-5	2-Nitrophenol	20 U
105-67-9	2,4-Dimethylphenol	20 U
65-85-0	Benzoic Acid	100 U
111-91-1	bis-2-ChloroethoxyMethane	20 U
120-83-2	2,4-Dichlorophenol	20 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	Naphthalene	20 U
106-47-8	4-Chloroaniline	20 U
87-68-3	Hexachlorobutadiene	20 U
59-50-7	4-Chloro-3-Methylphenol	20 U
91-57-6	2-Methylnaphthalene	20 U
77-47-4	Hexachlorocyclopentadiene	20 U
88-06-2	2,4,6-Trichlorophenol	20 U
95-95-4	2,4,5-Trichlorophenol	100 U
91-58-7	2-Chloronaphthalene	20 U
88-74-4	2-Nitroaniline	100 U
131-11-3	Dimethyl Phthalate	20 U
208-96-8	Acenaphthylene	20 U
99-09-2	3-Nitroaniline	100 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	20 U
51-28-5	2,4-Dinitrophenol	100 U
100-02-7	4-Nitrophenol	100 U
132-64-9	Dibenzofuran	20 U
121-14-2	2,4-Dinitrotoluene	20 U
606-20-2	2,6-Dinitrotoluene	20 U
84-66-2	Diethylphthalate	20 U
7005-72-3	4-Chlorophenyl-phenylether	20 U
86-73-7	Fluorene	20 U
100-01-6	4-Nitroaniline	100 U
534-52-1	4,6-Dinitro-2-Methylphenol	100 U
86-30-6	N-Nitrosodiphenylamine (1)	20 U
101-55-3	4-Bromophenyl-phenylether	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	100 U
85-01-8	Phenanthrene	20 U
120-12-7	Anthracene	20 U
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	Fluoranthene	20 U
129-00-0	Pyrene	20 U
85-68-7	Butylbenzylphthalate	20 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	20 U
117-81-7	bis(2-Ethylhexyl)Phthalate	20 U
218-01-9	Chrysene	20 U
117-84-0	Di-n-Octyl Phthalate	20 U
205-99-2	Benzo(b)Fluoranthene	20 U
207-08-9	Benzo(k)Fluoranthene	20 U
50-32-8	Benzo(a)Pyrene	20 U
193-39-5	Indeno(1,2,3-cd)Pyrene	20 U
53-70-3	Dibenz(a,h)Anthracene	20 U
191-24-2	Benzo(g,h,i)Perylene	20 U

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES RECEIVED APR 2 9 1986

Case No 3558

Sample Number EG 536

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 2-6-86

Date Analyzed 2-12-86

Conc/Dil Factor 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/L or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1000 ml or W_s — V_t 10,000 ul V_i 4.0 ul

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number: EG 536

Organics Analysis Data Sheet
(Page 4)

RECEIVED APR 2 9 1988

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	123422	4-hydroxy-4-methyl-2-pentanone *	BAN	206	26
2.					
3.		no volatiles found	VOA		
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

* product of the aldol condensation of acetone

86EP04R10

RECEIVED APR 2 9 1986

Sample Number
EG537

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201138
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Hall
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 30170
Date Analyzed: 2-8-86 1630
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethene	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 U
10061-02-6	Trans-1, 3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1, 1, 2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1, 3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 U
108-88-3	Toluene	2 BJ 5 U NO TC
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	5 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be stated.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration / dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible / probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

RECEIVED APR 2 9 1986

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number: EG 537

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-6-86

Conc/Dil Factor: 1

Percent Moisture (Decanted) 1726

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

FRN 27074

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	20 U
111-44-4	bis-2-Chloroethylether	20 U
95-57-8	2-Chlorophenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	20 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
39638-32-9	bis(2-chloroisopropyl)Ether	20 U
106-44-5	4-Methylphenol	20 U
621-64-7	N-Nitroso-Di-n-Propylamine	20 U
67-72-1	Hexachloroethane	20 U
98-95-3	Nitrobenzene	20 U
78-59-1	Isophorone	20 U
88-75-5	2-Nitrophenol	20 U
105-67-9	2,4-Dimethylphenol	20 U
65-85-0	Benzoic Acid	100 U
111-91-1	bis-2-Chloroethoxy)Methane	20 U
120-83-2	2,4-Dichlorophenol	20 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	Naphthalene	20 U
106-47-8	4-Chloroaniline	20 U
87-68-3	Hexachlorobutadiene	20 U
59-50-7	4-Chloro-3-Methylphenol	20 U
91-57-6	2-Methylnaphthalene	20 U
77-47-4	Hexachlorocyclopentadiene	20 U
88-06-2	2,4,6-Trichlorophenol	20 U
95-95-4	2,4,5-Trichlorophenol	100 U
91-58-7	2-Chloronaphthalene	20 U
88-74-4	2-Nitroaniline	100 U
131-11-3	Dimethyl Phthalate	20 U
208-96-8	Acenaphthylene	20 U
99-09-2	3-Nitroaniline	100 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	20 U
51-28-5	2,4-Dinitrophenol	100 U
100-02-7	4-Nitrophenol	100 U
132-64-9	Dibenzofuran	20 U
121-14-2	2,4-Dinitrotoluene	20 U
606-20-2	2,6-Dinitrotoluene	20 U
84-66-2	Diethylphthalate	20 U
7005-72-3	4-Chlorophenyl-phenylether	20 U
86-73-7	Fluorene	20 U
100-01-6	4-Nitroaniline	100 U
534-52-1	4,6-Dinitro-2-Methylphenol	100 U
86-30-6	N-Nitrosodiphenylamine (1)	20 U
101-55-3	4-Bromophenyl-phenylether	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	100 U
85-01-8	Phenanthrene	20 U
120-12-7	Anthracene	20 U
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	Fluoranthene	20 U
129-00-0	Pyrene	20 U
85-68-7	Butylbenzylphthalate	20 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	20 U
117-81-7	bis(2-Ethylhexyl)Phthalate	20 U
218-01-9	Chrysene	20 U
117-84-0	Di-n-Octyl Phthalate	20 U
205-99-2	Benzo(b)Fluoranthene	20 U
207-08-9	Benzo(k)Fluoranthene	20 U
50-32-8	Benzo(a)Pyrene	20 U
193-39-5	Indeno(1,2,3-cd)Pyrene	20 U
53-70-3	Dibenzo(a,h)Anthracene	20 U
191-24-2	Benzo(g,h,i)Perylene	20 U

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES RECEIVED APR 2 9 1986

Case No 5558

Sample Number EG 557

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-6-86

Date Analyzed 2-12-86

Conc/Dil Factor 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/L or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1000 ml or W_s — V_t 10,000 ul V_i 4.0 ul

Laboratory Name HAZLETON LABORATORIES

Case No 5558

Sample Number EG537

Organics Analysis Data Sheet
(Page 4)

RECEIVED APR 2 9 1986

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	123422	4-hydroxy-4-methyl-2-pentanone *	BAN	208	13
2.					
3.	—	Unknown	VOA	65	52
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

* product of the aldol condensation of acetone.

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86FP04580

Sample Number
EG 538

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201139
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Hill
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 80171
Date Analyzed: 2-8-86 1710
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 U
10061-02-6	Trans-1, 3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1, 1, 2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1, 3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 U
108-88-3	Toluene	2BJ
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	4J

NO TC

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explained.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates a compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution factor. (This is not necessarily the instrument detection limit.) The footnote should read: U- Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name HAZLETON LABORATORIES

Case No 5558

Sample Number EG538

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

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Concentration: (Low) Medium (Circle One)

GPC Cleanup ☐Yes ☒No

Date Extracted/Prepared: 2-6-86

Separatory Funnel Extraction ☒Yes

Date Analyzed: 2-6-86

Continuous Liquid - Liquid Extraction ☐Yes

Conc/Dil Factor: 1

FRN 27075

Percent Moisture (Decanted) 1814

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	20 U
111-44-4	bis-2-Chloroethyl Ether	20 U
95-57-8	2-Chlorophenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	20 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
39638-32-9	bis(2-chloroisopropyl)Ether	20 U
106-44-5	4-Methylphenol	20 U
621-64-7	N-Nitroso-Di-n-Propylamine	20 U
67-72-1	Hexachloroethane	20 U
98-95-3	Nitrobenzene	20 U
78-59-1	Isophorone	20 U
88-75-5	2-Nitrophenol	20 U
105-67-9	2,4-Dimethylphenol	20 U
65-85-0	Benzoic Acid	100 U
111-91-1	bis-2-Chloroethoxy)Methane	20 U
120-83-2	2,4-Dichlorophenol	20 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	Naphthalene	20 U
106-47-8	4-Chloroaniline	20 U
87-68-3	Hexachlorobutadiene	20 U
59-50-7	4-Chloro-3-Methylphenol	20 U
91-57-6	2-Methylnaphthalene	20 U
77-47-4	Hexachlorocyclopentadiene	20 U
88-06-2	2,4,6-Trichlorophenol	20 U
95-95-4	2,4,5-Trichlorophenol	100 U
91-58-7	2-Chloronaphthalene	20 U
88-74-4	2-Nitroaniline	100 U
131-11-3	Dimethyl Phthalate	20 U
208-96-8	Acenaphthylene	20 U
99-09-2	3-Nitroaniline	100 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	20 U
51-28-5	2,4-Dinitrophenol	100 U
100-02-7	4-Nitrophenol	100 U
132-64-9	Dibenzofuran	20 U
121-14-2	2,4-Dinitrotoluene	20 U
606-20-2	2,6-Dinitrotoluene	20 U
84-66-2	Diethylphthalate	20 U
7005-72-3	4-Chlorophenyl-phenylether	20 U
86-73-7	Fluorene	20 U
100-01-6	4-Nitroaniline	100 U
534-52-1	4,6-Dinitro-2-Methylphenol	100 U
86-30-6	N-Nitrosodiphenylamine (1)	20 U
101-55-3	4-Bromophenyl-phenylether	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	100 U
85-01-8	Phenanthrene	20 U
120-12-7	Anthracene	20 U
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	Fluoranthene	20 U
129-00-0	Pyrene	20 U
85-68-7	Butylbenzylphthalate	20 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	20 U
117-81-7	bis(2-Ethylhexyl)Phthalate	20 U
218-01-9	Chrysene	20 U
117-84-0	Di-n-Octyl Phthalate	20 U
205-99-2	Benzo(b)Fluoranthene	20 U
207-08-9	Benzo(k)Fluoranthene	20 U
50-32-8	Benzo(a)Pyrene	20 U
193-39-5	Indeno(1,2,3-cd)Pyrene	20 U
53-70-3	Dibenz(a,h)Anthracene	20 U
191-24-2	Benzo(g,h,i)Perylene	20 U

(1)-Cannot be seperated from diphenylamine

Laboratory Name HAZLETON LABORATORIES

Case No 5558

Sample Number
EG 538

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-6-86

Date Analyzed 2-12-86

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

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CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1000ml or W_s — V_t 10,000ul V_i 4.0ul

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number: EG538

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

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	CAS Number	Compound Name	Fraction	RT or (Scan) Number	Estimated Concentration (ug/l or ug/kg)
1.	123422	4-hydroxy-4-methyl-2-pentanone *	BAN	206	16
2.					
3.		no volatiles found	VOA		
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

* product of the aldol condensation of acetone

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

Date Received for Review: 3-24-86 Date Review Completed: 4-2-86

TO: Pat Petrella

FROM: Suzanne Kozlowski

SUBJECT: Chemical Recovery Systems Ohio R05-8512-06

Sample Description: Case # 5558 five (5) low water metals

Project Data Status: waiting for organics

FIT Data Review Findings:

Thallium and silver data is unuseable
Blank, MEG 196, had Al, Fe, Pb and Zn detected in it.
Duplicate MEG 195 and sample MEG 198 were okay.

Additional Comments:

Book No. 5
Page No. 108

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

E: 3-21-86

T. Review of Region V CLP Data Received for Review on 3/4/86

RECEIVED MAR 2 4 1986

A. Curtis Ross, Director (5SCRL) Central Regional Laboratory

D. Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: Chemical Recovery Systems SMO Case No. 5558

EPA Data Set No. SF 3031 No. of Samples: 5 D.U./Activity Numbers Y051C4Y500

CRL No. 86FP04578 - 86FP04580

SMO Traffic No. MEG195 - MEG198 ; MEE311

CLP Laboratory: Chemtech Hrs. Required for Review: 1

Following are our findings.

This review covers five low concentration water samples analyzed for metals.

The spike recovery for Tl (50%) was biased low; the Tl results are estimated.

The Ag data is unuseable due to a low LCS (52%) and a low spike recovery (42%).

(The lab did not take corrective action as a result of having a a low Ag LCS %R.)

Jan Pels 3/20/86

- [ ] Data are acceptable for use.
- [x] Data are acceptable for use with qualifications noted above.
- [ ] Data are preliminary - pending verification by Contractor Laboratory.
- [ ] Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

Date 2-26-86 EH

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name CHEMTECH CONSULTING GROUP Case No. 5558

SOW No. 784 Q.C. Report No. 615

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEG 195	G2-615-01		
196	-02		
197	-03		
198	-04		
MEE 311	-05		

Comments:

ICP Interelement and background corrections applied? Yes X No ____.

If yes, corrections applied before X or after ____ generation of raw data.

Footnotes:

NR - not required by contract at this time

Form I:

Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP/Flame AA) or F (for furnace).

U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

S - Indicates value determined by Method of Standard Addition.

R - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

Form I

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86FP04R10

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEG 196

Date 2-26-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME CHEMTECH CONSULTING GROUP CASE NO. 5558

SOW NO. 784

LAB SAMPLE ID. NO. 62-615-02 QC REPORT NO. 615

BLANK

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water ✓ Soil _____ Sludge _____ Other BK.

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	[95] P	13.	Magnesium	238 U P
2.	Antimony	50 U P	14.	Manganese	14 U P
3.	Arsenic	8 U F	15.	Mercury	0.19 U
4.	Barium	67 U P	16.	Nickel	20 U P
5.	Beryllium	3 U P	17.	Potassium	500 U P
6.	Cadmium	4 U P	18.	Selenium	4 U F
7.	Calcium	598 U P	19.	Silver	7 U PR
8.	Chromium	8 U P	20.	Sodium	2700 U P
9.	Cobalt	20 U P	21.	Thallium	6 U FR
10.	Copper	16 U P	22.	Tin	27 U F
11.	Iron	[61] P	23.	Vanadium	30 U P
12.	Lead	[3] F	24.	Zinc	26 P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager E Hedvall

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86EP04578

EPA Sample No. MEG 198

Date 2-26-86

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

INORGANIC ANALYSIS DATA SHEET

LAB NAME CHEMTECH CONSULTING GROUP CASE NO. 5558

SOW NO. 784

LAB SAMPLE ID. NO. 62-615-04 QC REPORT NO. 615

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water ✓ Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	8290 P	13.	Magnesium	9380 P
2.	Antimony	50U P	14.	Manganese	201 P
3.	Arsenic	8U F	15.	Mercury	0.19U
4.	Barium	[79] P	16.	Nickel	[22] P
5.	Beryllium	3U P	17.	Potassium	[4810] P
6.	Cadmium	4U P	18.	Selenium	4U F
7.	Calcium	29300 P	19.	Silver	7U PR
8.	Chromium	(12) P	20.	Sodium	15700 P
9.	Cobalt	20U P	21.	Thallium	6U FR
10.	Copper	16U P	22.	Tin	27U F
11.	Iron	12000 P	23.	Vanadium	30U P
12.	Lead	(9.2) F	24.	Zinc	54 P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager E Hedvall

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U.S. EPA Contract Laboratory Program
Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No. MEG 195

Date 2-26-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME CHEMTECH CONSULTING GROUP CASE NO. 5558

SOW NO. 784

LAB SAMPLE ID. NO. 62-615-01 QC REPORT NO. 615

Duplicate of MEG 198

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water ✓ Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	8380 P	13.	Magnesium	9010 P
2.	Antimony	50 U P	14.	Manganese	195 P
3.	Arsenic	8 U F	15.	Mercury	0.19 U
4.	Barium	[86] P	16.	Nickel	20 U P
5.	Beryllium	3 U P	17.	Potassium	5320 P
6.	Cadmium	4 U P	18.	Selenium	4 U F
7.	Calcium	28100 P	19.	Silver	7 U PR
8.	Chromium	(13) P	20.	Sodium	15000 P
9.	Cobalt	20 U P	21.	Thallium	6 U FR
10.	Copper	16 U P	22.	Tin	27 U F
11.	Iron	11800 P	23.	Vanadium	30 U P
12.	Lead	(11) FS	24.	Zinc	57 P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager E Hedvat

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U.S. EPA Contract Laboratory Program
Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEE 311

Date 2-26-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME CHEMTECH CONSULTING GROUP CASE NO. 5558

SOW NO. 784

LAB SAMPLE ID. NO. 62-615-05 QC REPORT NO. 615

RECEIVED MAR 24 1986

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water ✓ Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	8170 P	13.	Magnesium	9060 P
2.	Antimony	50U P	14.	Manganese	191 P
3.	Arsenic	8U F	15.	Mercury	0.19U
4.	Barium	67U P	16.	Nickel	20U P
5.	Beryllium	3U P	17.	Potassium	5420 P
6.	Cadmium	4U P	18.	Selenium	4U F
7.	Calcium	28700 P	19.	Silver	7U PR
8.	Chromium	(9.6) P	20.	Sodium	15400 P
9.	Cobalt	20U P	21.	Thallium	6U FR
10.	Copper	16U P	22.	Tin	27U F
11.	Iron	12200 P	23.	Vanadium	30U P
12.	Lead	(15) FS	24.	Zinc	62 P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager _____

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86FP04580

EPA Sample No. MEG 197

Date 2-26-86

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

INORGANIC ANALYSIS DATA SHEET

LAB NAME CHEMTECH CONSULTING GROUP CASE NO. 5558

SOW NO. 784

LAB SAMPLE ID. NO. 62-615-03 QC REPORT NO. 615

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water ✓ Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	8520 P	13.	Magnesium	8960 P
2.	Antimony	50u P	14.	Manganese	196 P
3.	Arsenic	8u F	15.	Mercury	0.19u
4.	Barium	67u P	16.	Nickel	20u P
5.	Beryllium	3u P	17.	Potassium	5290 P
6.	Cadmium	4u P	18.	Selenium	4u F
7.	Calcium	27500 P	19.	Silver	7u PR
8.	Chromium	[9.4] P	20.	Sodium	14600 P
9.	Cobalt	20u P	21.	Thallium	6u FR
10.	Copper	16u P	22.	Tin	27u F
11.	Iron	12300 P	23.	Vanadium	30u P
12.	Lead	(9.6) F	24.	Zinc	56 P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager L. Hedrick